THE IMPACT OF COVID-19 PANDEMIC ON THE TOURISM SECTOR IN INDONESIA

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ABSTRACT

Tourism is one of the strategic sectors and has an important role as a source of foreign exchange and encourages national economic growth. Since March 2020, the Covid-19 pandemic has begun to enter Indonesia, and the cumulative infection curve has not sloped and is still increasing exponentially until now. This phenomenon has resulted in a contraction in the Indonesian economy or created negative economic growth, as well as creating very bad conditions for the tourism sector in Indonesia. This study aims to examine the influence of the Covid-19 pandemic on tourism and its implications for economic growth in Indonesia. The data used are quarterly time-series data before and after the Covid-19 Pandemic (2018-2020). This study uses a regression equation model that is estimated by using ordinary least squares (OLS). Secondary data used are data air transport and hotel accommodation, as a proxy for tourism variables. The results show that the Covid-19 Pandemic harms Indonesian tourism, and has negative implications for Indonesia's GDP. From the simulation results, the findings of this study also calculate the amount of potential loss in the Tourism and Indonesian economy during the Covid-19 Pandemic.

Keywords: Pandemic, Covid-19, Tourism, Economic Growth

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INTRODUCTION

In entering the year 2021, the world economy is facing a quite severe phenomenon for all mankind, in almost all countries in the world. In 2020, the International Monetary Fund and World Bank predict that the global economy will enter a very sharp recession (Liu et al., 2020). This phenomenon is caused by the emergence

of a new pandemic virus in almost all countries in the world, namely Coronaviruses (CoV).

Coronavirus is one of the main pathogens that attack the human respiratory system. Previous coronaviral outbreaks (CoV) include Middle East Respiratory Syndrome (MERS) -CoV and Severe Acute Respiratory Syndrome (SARS) - CoV which have significantly caused a major threat to humans. In December 2019, several patients were hospitalized with an initial diagnosis of pneumonia. This patient was found to have an epidemiological relationship with a wet animal and seafood wholesale market in Wuhan, Hubei Province, China (Chen et al., 2020; Lu et al., 2020). Early studies predicted a possible start to a coronavirus outbreak. WHO on 11 February 2020 estimated that the number of Covid-19 reproduction significantly ranged from 2.24 to 3.58 (Zhao et al., 2020). In December 2019, the first cases of Covid-19 infection were reported (Lu et al., 2020). Nearly half of these patients have an underlying disease, especially cardiovascular disease, hypertension, and diabetes (Huang et al., 2020). Symptoms between previous betacoronavirus infection and Covid-19 such as bilateral ground-glass opacities on CT scan, dry cough, dyspnea, and fever are similar (Huang et al., 2020). More importantly, Covid-19 shows a unique clinical picture such as targeting the lower airway as evidenced by symptoms such as sore throat, rhinorrhea, and sneezing (Assiri et al., 2013; Li et al., 2020). Besides, based on the results of chest X-rays, several cases were found to have infiltration in the upper lobe of the lungs associated with increased dyspnea with hypoxemia (Phan et al., 2020). Although patients infected with Covid-19 reports gastrointestinal (GI) symptoms such as diarrhea, a small proportion of SARS-CoV or MERS-CoV patients have similar GI disorders. Therefore, analysis of stool and urine samples is necessary to eliminate the possibility of alternative transmission routes, in particular by health care staff, patients, etc. Therefore, the development of methods to identify various modes of transmission such as fecal and urine samples is needed to establish strategies to inhibit and/or reduce transmission and develop therapies to manage the disease.

Until early February 2021, the number of Covid-19 infections has spread to 327 countries. The cumulative number of Covid-19 has reached 82,401,767 people and the number of deaths has reached 1,801,237 people. In line with the global conditions above, Indonesia is also facing the same problem, where the Covid-19 Pandemic has had a broad impact on Indonesia's economic activities. The government has carried out a series of policies simultaneously, both handling health to restrain the pace of the development of Covid-19, and on the other hand, has tried hard to maintain people's purchasing power, so that the economy is not paralyzed, and economic activity runs under control. To overcome the economic contraction caused by the pandemic, government policies in handling Covid-19 in Indonesia were carried out with rapid responsiveness.

Indonesia has made policy restrictions on travel to and from countries that are in the red zone of transmission during the Covid-19 pandemic to break the chain of Covid-19 transmission, this step follows policies that have been implemented by several countries. This restriction policy has an impact on flight schedules, how some airlines do not cancel their flights and some airlines are forced to keep on carrying out flights even though most of their airplane seats are not filled for the fulfillment of customer rights. Most of the customers also canceled their flight ticket orders due to the increasing spread of Covid-19.

This situation forced the government to take steps and policies by giving discounts for travelers destined for Malang, Yogyakarta, Belitung, Manado, Batam, Labuan Bajo, Bintan, Lombok, Denpasar and Lake Toba. Most European countries have also made policies or regulations requiring all airlines to use about 80% of the quota for flights operating outside the continent of Europe so that they do not lose their quotas from their competing airlines. The policy of restricting travel to countries that are in the red zone of Covid-19 transmission has not only been carried out by Indonesia but has also been implemented by Australia, China, Russia, Italy, Singapore, and other countries.

This has an impact on the tourism sector in Indonesia. Data compiled from the Central Bureau of Statistics explained that in 2019 foreign tourists from China who came to Indonesia touched 2.07 million tourists or 12.8% of the total number of foreign tourists throughout 2019. The Covid-19 pandemic resulted in a decline in tourists coming to Indonesia. Supporting sectors for tourism, namely restaurants, hotels, and retailers, have also been affected by the Covid-19 pandemic. Hotel profits have decreased by up to 40%, which has an impact on hotel operations and threatens its business continuity. The decline in foreign visitors also affects the income of restaurants or restaurants whose customers are more dominant than visitors from abroad (Block, 2017). Weak tourism growth also has an impact on the retail industry. The areas where the retail sector is most affected are Jakarta, Medan, Bangka Belitung, Riau Islands, Manado, and Bali. The Covid-19 pandemic is also expected to affect the micro, small and medium business sector, this is because foreign visitors who come to a destination will usually buy souvenirs to take home. If foreign visitors who visit decline, it is certain that income from micro, small and medium enterprises will also decrease. Bank Indonesia has released data in 2016 related to the micro, small and medium business sector which states that micro, small and medium enterprises are very dominant in business units in Indonesia and the type of micro business can absorb a lot of workforces. Based on the description above, the researchers are interested in seeking deeper information regarding the impact of the Covid-19 pandemic on Indonesian tourism.

The purpose of this study is to analyze the impact of the Covid-19 pandemic on tourism in Indonesia. Based on the data components forming Indonesia's Gross Domestic Product (GDP), the data used are national data on air transport and accommodation, as a proxy variable in the analysis of Indonesian tourism. The limitation of this study lies in the data, where the data used is proxy data, and does not accommodate the entire tourism sector, including data on foreign tourists' visits, as well as the creative economy engaged in souvenirs, tour guides, exchange rates for foreign exchange funds generated. Therefore, the next research suggestion can use more independent variables.

LITERATURE REVIEW

1. Tourism

Tourism in Indonesian is called "pariwisata", and comes from two words, namely *Pari* and *Wisata*. *Pari* can be interpreted as many, many times, circling or complete. Meanwhile, *wisata* can be defined as a trip or traveling. On that basis, the word tourism

can also be interpreted as a trip that is carried out many times or in circles from one place to another.

According to Hunziker & Krapf (1942), "tourism is a particular activity related to the travel and stay of non-residents and does not lead to permanent residence and is not related to any income-earning activities".

Tourism Society of England defined: "Tourism is the temporary, short-term movement of people to destinations outside where they normally live and work and their activities during their stay at each destination. This includes movement for all purposes." (Beaver, 2002)

Based on "Undang-undang No. 10 Tahun 2009" concerning tourism, that the state of nature, flora, and fauna as a gift from the one and only God, as well as historical, artistic, and cultural heritage owned by the Indonesian people, are resources and capital for tourism development to increase prosperity and people's welfare as contained in Pancasila and the Preamble to the 1945 Constitution of the Republic of Indonesia.

Based on the tourism definition above, it can be seen that tourism is a temporary and short-term movement of people to destinations outside their place of residence and not for earning a living, but for fun and leisure, with the following characteristics:
1. Two locations are interrelated, namely the area of origin and destination.
2. As a destination, it must have an object and a tourist attraction.
3. As a destination, it must have tourism facilities and infrastructure.
4. Implementing trips to the destination are carried out temporarily.
5. There is an impact, especially on the destination area in terms of socio-culture, economy, and environment.

2. Pandemic Corona Virus Disease-19

A pandemic is an epidemic that occurs on a large scale and reaches several countries or crosses international borders. This disease affects humans on a world scale. (Porta, 2008).

The world has experienced several types of pandemics, including smallpox and tuberculosis. The most fatal pandemic in recorded history was the Black Death (also known as the Plague), which killed an estimated 75-200 million people in the 14th century (Serbu, 2020). Then the influenza pandemic in 1918 (Spanish flu), (Rosenwald, 2020). The current pandemics are COVID-19 (SARS-CoV-2) and HIV / AIDS. (Roychoudhury et al., 2020).

A new strain of coronavirus was first identified in the city of Wuhan, Hubei Province, China, in late December 2019. It has caused a cluster of cases of acute respiratory disease, which is referred to as coronavirus disease 2019 (COVID-19) (Stawicki et al., 2020). On 11 March 2020, the World Health Organization characterized the spread of COVID-19 as a pandemic, marking the first global pandemic since the 2009 swine flu pandemic. As of 18 February 2021, the number of people infected with COVID-19 has reached 110,602,492 worldwide, of whom 85,469,351 have recovered. The death toll is 2,444,738. (WHO, 2021)

Research Hypothesis

The Covid-19 pandemic harms tourism in Indonesia. Following the secondary data approach used, namely air transport and hotel accommodation, the hypothesis of this study is as follows.

H_1: The Covid-19 pandemic harms air transport

H_2: The Covid-19 pandemic harms hotel accommodation

RESEARCH METHOD

The method used in this research is the descriptive quantitative method, which uses an approach called secondary data analysis (Sugiyono, 2016).

Data resulting from quantitative analysis is usually presented with pictograms and piecharts, bar or line charts, and frequency distribution tables (McNabb, 2017). For discussion of the research, the analysis will be explained in-depth and the interpretation of the data presented in a straightforward and detailed manner to produce conclusions containing short answers to the formulation of the problem based on the data that has been collected. This study has the aim of obtaining information about the current condition and then analyzing the relationship between existing variables (Moen & Middelthon, 2015).

The equation model built is as follows:

$$Trans = a1 + b1\ D + e1$$
$$Acom = a2 + b2\ D + e2$$

while:

Trans = air transport

Acom = hotel accommodation

D = dummy variable: 0 = no pandemic, 1 = pandemic

a_i = intercept

b_i = regression coefficient

e_i = disturbance error

RESULTS AND DISCUSSION

1. Global Covid-19 Pandemic Trend

The latest developments, until February 7, 2021, the Covid-19 pandemic has spread in 237 countries. The cumulative confirmed Covid-19 has reached 105,394,434 people, and the number of deaths has reached 2,302,306 people. The world fatality rate is 2.18. Based on the highest mortality rate, several countries were selected, to see Indonesia's current position, as presented in Table 1.

Table 1. Cumulative Covid-19 Infection, Death Cases and Fatality Rate in several countries in the world as of February 7, 2021

No	Country	Cumulative Covid-19 Infection	Death case (people)	Fatality Rate (%)
1	United States of America	26.547.977	455.735	1,72
2	Brazil	9.447.165	230.034	2,43
3	Mexico	1.912.871	164.290	8,59
4	India	10.826.363	154.996	1,43
5	The United Kingdom	3.929.839	112.092	2,85

6	Italy	2.625.098	91.003	3,47
7	France	3.262.505	78.389	2,40
8	Russian Federation	3.967.281	76.661	1,93
9	Germany	2.284.010	61.517	2,69
10	Spain	2.913.425	60.802	2,09
11	Iran	1.459.370	58.412	4,00
12	Colombia	2.142.660	55.403	2,59
13	Argentina	1.970.009	48.985	2,49
14	South Africa	1.473.700	46.180	3,13
15	Peru	1.173.045	41.933	3,57
16	Poland	1.550.255	39.087	2,52
17	Indonesia	1.147.010	31.393	2,74

Source: WHO, 2021

The United States is in the highest position in the world, with the number of confirmed Covid-19 people reaching 26,547,977 people (25.2%), and the highest death rate in the world, at 455,735 people (19.8%). The second-largest position confirmed by Covid-19 was India, with 10,826,363 people (10.27%) and followed by Brazil with 9,447,165 people (8.96%). Meanwhile, the second-highest death rate after the USA was Brazil, which was 230,034 people, followed by Mexico with 164,290 people. From these data, it can be seen that the highest fatality rate in the world is Brazil, at 8.6%. Several countries in Europe were also affected by the Covid-19 pandemic and a relatively high number of cases of death.

2. The Trend of the Covid-19 Pandemic in Indonesia

Indonesia is included in the high confirmed group of Covid-19, and is in the 19th place in the world, namely 1,147,010 people, with a death toll of 31,393 people. The fatality rate reached 2.73% and is above the world average (2.18%). The confirmed developments of Covid-19 and the increase in daily cases (new cases) are presented in Figure 1 below.
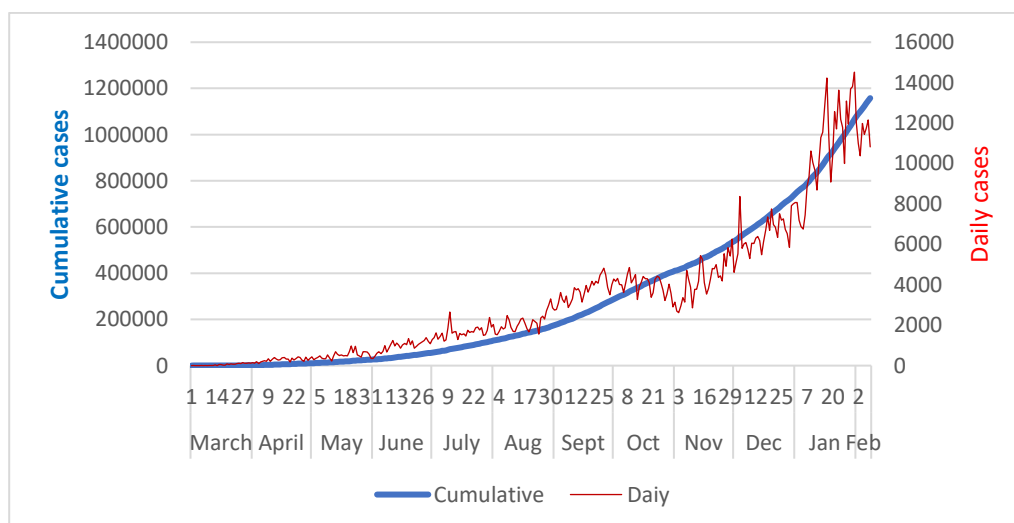

Figure 1. Indonesia's Covid-19 Infection

The data above shows that the confirmed curve for Covid-19 is not sloping and is even still rising with an exponential increase. In October 2020 there was a trend of daily increase which decreased from 4850 people to a low of 2618 people. The average daily increase in October is 4007 people per day. However, daily new cases continued to increase, reaching an average of 6479 people per day in December 2020, and in January 2021 an average of 10,684 people per day, and in February it continued to increase to reach 11 441 people per day. This requires controlling the handling of Covid-19 and economic recovery which will be increasingly prioritized in 2021.

RESULT AND DISCUSSION

The Impact of the Covid-19 Pandemic on Tourism

The impact of the pandemic-19 is seen in the drastic reduction of international tourist visits and travel services in 2020 compared to the previous year, as shown in Figure 2.

Figure 2. Foreign Tourists Visits and Export Value
of Travel Services
Source: Central Bureau of Statistics

In the third quarter of 2020, the number of visits by foreign tourists (tourists) to Indonesia only reached 475 thousand people. Foreign tourist visits in the third quarter of 2020 slowed slightly compared to the previous quarter which contracted by 1.2 percent (QtQ). The number of foreign tourist visits also experienced a deep decline of 86 percent (YoY). The stagnation of foreign tourist visits during the last two quarters was influenced by the Covid-19 sector in Indonesia and a new wave of infections in Indonesia's main source countries of foreign tourists.

The decline in the number of foreign tourist visits also caused a decline in the value of travel service exports (foreign exchange) in the third quarter of 2020. The value of tourism foreign exchange in the third quarter of 2020 fell 98 percent (YoY) but improved from the previous quarter by 10.6 percent (QtQ). This condition resulted in the average expenditure of foreign tourists (people) per visit in this period of the only USD206, or much lower than the average in the previous period of USD1,076.

Several major source countries for foreign tourists have begun to ease flight restrictions both to and from Indonesia. This policy is sufficient to encourage an increase in foreign tourist visits to Indonesia through the air gate. In the third quarter of

2020, the number of foreign tourists arriving through air gates reached 19,655 people, an increase of 6 times compared to the previous quarter (QtQ) which was only 2,704 people. However, this volume is still very low when compared to the same period in 2019, or decreased by 99.3 percent (YoY).

Travel activities at the national level have also been affected by Covid-19, as well as Large-scale Social Restrictions (PSBB) in several regions of Indonesia. In the third quarter of 2020, the government began to loosen the PSBB policy in some areas. This has a positive impact on the tourism sector in Indonesia.

In particular, the developments in air transport and accommodation in 2018 - 2020 are presented, as shown in Figure 3 and Table 2.
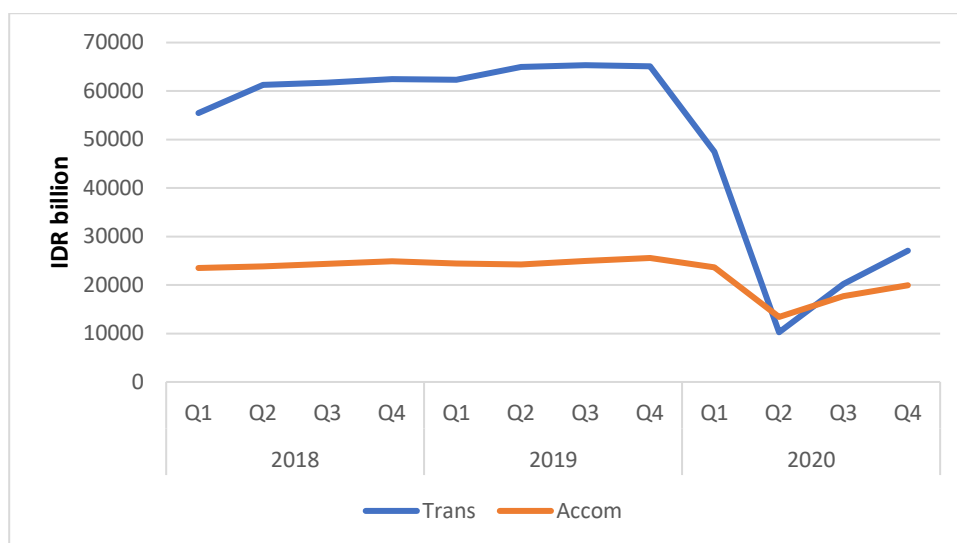

Figure 3. Air transport and Accommodation Before and
After the Covid-19 Pandemic

In 2018-2019, the average air transport was IDR 62,327.5 billion, and in 2020 it decreased in the first quarter to IDR 47,497.9 and decreased sharply in the second quarter to the lowest level of 10,249.8 and The third quarter has increased to a level of Rp. 20,085.5 billion. Likewise, with the development of accommodation, it has the same pattern, namely a decline in the 1st quarter, and a sharp decline in the 2nd quarter and an increase in the 3rd quarter, as presented in Table 2.

Table 2. Air transport and Accommodation Before and After the Covid-19 Pandemic

		Air transport	Accommodation
		----------------------Rp billion------------------	
2018	Q1	55.479,6	23.506,4
	Q2	61.247,3	23.816,2
	Q3	61.726,0	24.377,7
	Q4	62.478,2	24.871,4
2019	Q1	62.301,8	24.401,3
	Q2	64.975,0	24.258,4

	Q3	65.331,2	24.932,3
	Q4	65.080,5	25.568,5
2020	Q1	47.497,9	23.635,5
	Q2	10.249,8	13.411,2
	Q3	20.196,5	17.689,5
	Q4	27.085,5	19.914,8

Source: Bank Indonesia, 2020

1. Impact of the Covid-19 Pandemic on Air transport

The impact of the Covid-19 Pandemic on tourism, especially air transport, is presented in Table 3 below.

Table 3. Regression Analysis of the Effect3 of the Covid-19 Pandemic on Air transport

	Coefficients	t Stat	P-value	Adj. R-Square	F	Sig. F
Intercept	62327,5	19,505	0,00%	79,04%	42,472	0,01%
Air Transport	-36070,0	-6,517	0,01%			

The equation model built shows an Adjusted R-square value of 0.7904, where 79.04% of the diversity of air transport variables can be explained by the Covid-19 Pandemic independent variable. Besides that, the calculated F value is 42,472 and is greater than the F-table 5.117 (significant), meaning that the model built is quite good. This shows that the Covid-19 pandemic harms air transport, with a regression coefficient of -36344 (billion rupiahs). And this is supported by the t-value of 6.517and greater than the t-table of 2.262, or significant.

2. Impact of the Covid-19 Pandemic on Hotel Accommodations

The impact of the Covid-19 Pandemic on tourism, especially accommodation, is presented in Table 4 below.

Table 4. Regression Analysis of the Effect of the Covid-19 Pandemic on Hotel Accommodations

	Coefficients	t Stat	P-value	Adj. R-Square	F	Sig. F
Intercept	24466,5	28,780	0,00%	56,92%	15,536	0,28%
Hotel Accomodation	-5803,8	-3,942	0,28%			

The equation model built shows an Adjusted R-square value of 0.5692, where 56.92% of the diversity of accommodation variables can be explained by the Covid-19 Pandemic independent variable. The Covid-19 pandemic harms accommodation, with a

regression coefficient of -5803.8 (IDR billion). And this is supported by the t-Stat value of 3.942 and greater than the t-table of 2.262, or significant.

The results of the research hypothesis test show that the Covid-19 Pandemic has a negative and significant effect on the Indonesian Economy and Tourism in Indonesia, as summarized in Table 5.

Table 5. Hypothesis Test Results

	Coefficients	t Stat	P-value	Impact	Decision	Hypothesis testing
Tourism:						
Air Transport	-36070,0	-6,517	0,000	Negative	Reject Ho	Significant
Hotel Accomodation	-5803,8	-3,942	0,005	Negative	Reject Ho	Significant

Tourism Implications on Indonesia's GDP

The findings of this study indicate empirically that the Covid-19 pandemic has a negative and significant impact on tourism in Indonesia. This is an important problem and needs to be resolved because the Indonesian tourism industry is a strategic sector in the national economy.

The tourism sector has a strategic and broad aspect, including increasing foreign exchange earnings, creating jobs, stimulating the growth of the tourism industry, and is also related to tourism development in various countries. Besides, tourism contributes to economic growth through various channels including foreign currency income, attracting international investment.

With such a wide scope, and also the multiplier effect of tourism on the Indonesian economy, it is easy to understand that the implications of the Covid-19 pandemic have hit the Indonesian tourism industry very hard. The number of foreign tourist visits has decreased sharply, reaching 86 percent in 2020.

The development of Indonesian tourism from 2015 to 2020 is presented in Figure 4 below.
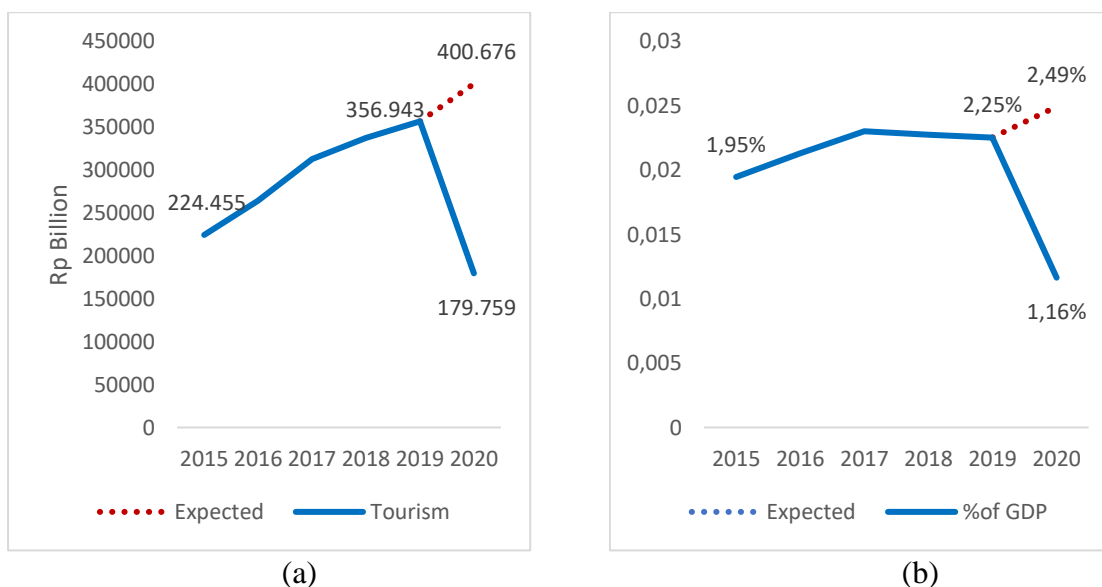

(a)

(b)

Figure 4. (a) Development of Indonesian Tourism and (b) Tourism's Contribution to
GDP in 2015 – 2020

In figure 4 part above shows that the Indonesian tourism sector grows consistently every year. In 2015, Indonesia's tourism sector reached Rp. 224.46 trillion, and in 2019 it increased by 60% to Rp. 356.94 trillion, with an average growth of 15% per year. However, in 2020, it decreased drastically by 49.6% to IDR 179.76 trillion and even lower than 2015. With the increase from 2015 to 2019, with trend simulation techniques, the value achieved by the tourism sector in 2020 - if there is no Covid-19 pandemic - can be estimated to reach IDR 400.68 trillion, or an increase of 12.25% compared to the year 2019. With this expected number, the value of the economic potential lost due to the 2020 pandemic is IDR 200.92 trillion.

In 2015, the contribution of the tourism sector to Indonesia's GDP reached 1.95% and increased every year to reach 2.25% in 2019 (Figure 4 part b). In 2020, the contribution of the tourism sector to Indonesia's GDP decreased very sharply to a very low level, 1,16%. The potential contribution of the tourism sector to Indonesia's 2020 GDP with No-Covid-19 is expected to reach 2.49%. This condition shows a very sharp decrease of -53.29%. With the contribution of the tourism sector to Indonesia's GDP of 1.16%, it also shows how the tourism sector is experiencing a very deep decline, where the conditions in 2020 match with the conditions of Indonesian tourism in 2011, where the contribution of tourism to GDP at that time was 1.13 %.

CONCLUSION

Until now, the Covid-19 pandemic is still increasing at an exponential rate. The results of this study indicate that the Covid-19 Pandemic harms the Indonesian economy, and will experience a contraction of 2.9 percent in 2020.

Based on the regression equation model that was built, it can be concluded that Covid-19 has a negative and significant impact on tourism in Indonesia, which is tested through the approach of air transport and hotel accommodation data. Government spending has increased significantly in line with the National Economic Recovery (PEN) and the Covid-19 pandemic countermeasures policy. The findings of this study also calculate the impact of the Pandemic on the decline in the tourism sector and its implications for GDP, where the economic potential lost due to the 2020 pandemic reached IDR 200.92 trillion, and the contribution of the tourism sector to GDP fell sharply by -53.29%, to level 1, 16%. This condition equaled tourism in 2011, meaning that the condition of Covid-19 has brought a long setback of up to 10 years back.

To overcome the problem of tourism in Indonesia during the current Covid-19 Pandemic, and its relation to the research variables are: (a) in terms of air transport: is the development of technology to provide data destinations insight. This tool provides a clear picture of the main origins of demand for destinations, which attract the most visits, (b) in terms of accommodation hotels: is a hotel insight analysis and travel analytical center, to help the hospitality industry understand where demand for rooms and property comes from, as well as how to target marketing the hotel. Meanwhile, the travel analytical center aims to provide users with a clear picture of how to manage operations and opportunities to reach potential visitors, (c) in line with solutions (a) and (b), the tourism sector will grow, and at the same time increase the share of the tourism sector in increasing GDP Indonesia.

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