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Analysis of Covid-19 impact on virtual hotel operation in Indonesia

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Abstract. The Covid-19 pandemic outbreak had a devastating effect on the economic sector in Indonesia, especially in the tourism sector. This study aims to reveal the impact Covid-19 on the Indonesia tourism sector especially the virtual hotel operation. This research uses a qualitative approach and content analysis as data mapping of Indonesia online media content. Nvivo-12 plus software is used to manage and analyze the data. The results of this research pandemic covid 19 outbreaks have an impact on the economy of Indonesia and affect startup virtual hotel operations (especially Airy rooms) to the point of closing operations in Indonesia. This research provides some insight into future research opportunities in the new normal conditions in tourism sector operation

Keywords. covid-19, tourism, virtual hotel operation, startup, technology

1. Introduction

Indonesia is an archipelagic nation whose tourism sector largely supports its economy [1]. Indonesia's tourism growth has been developing for over the last 10 years. With the help of technology, the development of tourism particularly in Indonesia is increasingly changing rapidly and has an impact on the development of the hospitality sector. The emergence of technological sophistication opens up opportunities particularly in the hospitality sector for business people [2]. The tourism sector is the core economy of Indonesia, due to the global pandemic, tourism, and hospitality sector was shutdown up to unpredictable times. Numerous studies have indicated the existence of the pandemic condition has contributed to a disturbance in the tourism sector's economic growth. Research findings indicate, as reported [3] that the occurrence of the Coronavirus in China has a major worldwide impact. People are hesitant and afraid to communicate with the Chinese population because of the danger of this virus. Owing

to the outbreak of this virus, international visitors canceled the tour, and subsequently, hotel reservations were also canceled. Further confirming the results of previous research [4] shows that the tourism sector is significantly affected by covid-19.

There are several companies in Indonesia that interested in hospitality sector, or better known as Virtual Hotel Operations (VHO) [5]. VHO is a start-up company whose goal is to re-brand logos, formats, and even property in accordance with the principles defined therein [1]. There was big three startups in virtual hotel operation in Asia namely Airy Room, Reddoorz, and OYO. Virtual hotel operation (VHO) initially emerged in 2015 with the low-cost or low-budget definition [6]. In 2017, the amount of online hotel room reservations using applications in Indonesia reached US\$ 1.780 million and reached US\$ 1.986 million in 2018, based on data from Statista 2019. The value of hotel room bookings increased in 2019, reaching US \$ 2,200 million. The value of online hotel reservations in Indonesia is projected to reach US\$ 2.408 million in 2020, US\$ 2.594 million in 2021, US\$ 2.752 million in 2022, and in 2023 to US\$ 2.879 million [1]. There appears to be no realization of predictions previously expressed based on the findings of previous research, this is due to the appearance of the covid-19 virus at the end of 2019 [7]. This study aims to conduct research in Indonesia virtual hotel operation companies namely Airy Rooms, one of the biggest startup in hospitality sector related to the effect caused by covid-19. Key themes and the changes by time of covid-19 in online media through content analysis. NVIVO 12 plus software is used to encourage researchers to map themes, examine the relationship between Indonesia's covid-19 content in online media and virtual hotel operations.

2. Literature Review

2.1 The Impact of Disasters to The Economics Growth

The end of 2019 became the start of the emergence of disasters that hit all countries around the world, especially economic growth [8]. The Covid-19 outbreaks were first found to be one of the most impactful and devastating outbreaks in the present-day modern period in China [7]. The first cases occurred in God before they were estimated to exceed 200,000 cases and spread quickly through other parts of the world, and at present the overall rise is more than 1 million with more than 100,000 deaths registered [9]. It has contributed to shifts in global society trends and practices in the conduct of everyday life [10]. The economic sector is the most important area impacted by this case, especially for the country that have dominant income from tourism sector. To prevent the spread of covid-19 [11], the practice of exporting and importing products must be halted.

Indonesia's economic activity partners in the first quarter of 2020 experienced a decline such as Singapore that experienced a decline of -2.2 percent, an EU country -2.7 percent, Hong Kong -8.9 percent and China experienced a decline of up to -6.8 percent. Often greatly affected is the United States of America. Economic growth has fallen by 2.3% to 0.3%, South Korea by 2.3% to 1.3%, Vietnam by 6.8% to 3.8%, while Indonesia has fallen from 4.9% to 2.9% [12]. The presence of the Covid-19 pandemic tragedy has undoubtedly made countries around the world continue to try to curb the spread of covid-19 by directly limiting travel and business practices [13]. In Indonesia to prevent the spread of covid-19 the Indonesian government implements broad periodic social restrictions (PSBB) through a task force to promote covid-19 administration [14]. The same applies to countries in Asia to prevent the virus from spreading, the government has implemented a policy of temporarily restricting entry to and exit from commercial activities [15].

2.2. The Impact of Covid-19 on The Tourism Sector

Nearly all countries around the world, including the tourism industry, have felt the effects caused by covid-19 [16]. Covid-19 impacted the tourism industry badly [17]. In many countries around the world, the tourism industry is the most important factor to raise foreign-exchange earnings [3]. The World Health Organization (WHO) has been declared at the end of March 2020 that the 19th plague was a pandemic [18]. With the advent of covid-19 in Indonesia, it has an exceptional impact on the entire field of society [14].

The presence of covid-19 has made tourism business people continue to lay off their employees until their hotel premises are closed [19]. Another finding was reported by [20] who stated that if not dealt with seriously, the impact of covid 19 would cause long-term losses in the short run. Jones & Comfort (2020) finding was pandemic covid-19 requires that they not only cause numerous problems in the tourism industry but also question the environmental changes that might occur in the future after this pandemic ends. Different results have also emerged that [22] reported, based on his parents' observations, that it took commitment and hard work to regain public trust to continue using tourism services after the 19th pandemic ended. There are several research studies conducted to identify the impact of covid-19 on the tourism sector in Table 1.

Table 1. Recent Studies Related to The Impact of Covid-19 on Tourism Sector

Title	Methodology	Finding	Author
Analysis of mobility trends during the Coronavirus Pandemic: Exploring the impacts on global aviation and travel in selected cities	The qualitative method approach is based on a set of supporting data.	The existence of the covid-19 pandemic has a very big impact that all the world is in a state of mental stress, nervousness and the aftermath of Covid 19. This sentiment is strongest in India, Japan, China, UK, Brazil and Canada, ranging from 68% -78%.	[7]
A content analysis of Chinese news coverage on Covid-19 and tourism	Qualitative approach using newspaper content analysis approach, the China Core Newspapers Full-Text Database in the China National Knowledge Infrastructure (CNKI) database (http://www.cnki.com.cn/).	The Covid-19 pandemic resulted in a crisis in the tourism sector caused by an epidemic and an unfavorable situation. On the other hand, the covid pandemic enriches the latest research on tourism, covid 19, and hospitality.	[23]
The impact of quarantine due to Covid-19 pandemic on the tourism industry in Lviv (Ukraine)	Using statistical and sociological assessment of the key factors and features of the indices and trends of the development of the tourist industry of Lviv in the context of crisis processes in the world tourism.	The global crisis due to the covid-19 pandemic and the implementation of long-term international quarantine measures has had a very negative impact on the tourism industry. The study shows that imposing quarantine due to covid-19 will significantly reduce all indicators of the tourism industry in Lviv by 2020.	[24]
The impact of Covid-19 on tourism industry in Malaysia	The qualitative method approach is based on a set of supporting data	The Covid 19 pandemic has had a huge impact on the tourism industry in Malaysia, especially the airline and hotel business. The outbreak of covid-19 has exposed	[25]

		a major risk to Visit Malaysia 2020 (VM2020) campaign as 50% of Malaysia's tourists are originate from Singapore and China. The increasing cases of covid-19 in both countries has led to the cancellation of many tours, which has already led to a large drop in the number of tourists to Malaysia and caused national loss. The loss was directly attributable to the outbreak of covid-19.	
The Effect of Coronavirus (Covid-19) in the Tourism Industry in China	Qualitative approach method	The results showed that the incidence of the Corona virus in China had a significant impact around the world. Due to the threat of this virus, outsiders are afraid to mingle with the Chinese population. Global tourists have canceled their program to visit China and Chinese tourists are barred from visiting overseas countries.	[3]

We all know the idea of startup business appeared in 2015, particularly in the hospitality sector. The presence of technology offers prospective business people a tremendous opportunity to increase their goal and market share. A virtual hotel system makes it easy for visitors to locate cheap-budget hotels. The move in the introduction of virtual hotel service is considered positive because it makes it easier for visitors to book, who first have to arrive at the hotel destination. VHO (virtual hotel operation) is a start-up company that has increasingly rapid in Indonesia. Indonesia has been one of the destinations of choice for entertainment for both domestic and international visitors. This is the reason why many virtual hotel operations (VHO) have emerged which are considered successful in the service process, one of which is Airy Rooms. Airy Rooms provides budget hotels the same as star-class hotels, with amenities. The growth of Airy Rooms in Indonesia has increased rapidly by implementing this principle, it is obvious that almost all of Indonesia has Airy rooms as an option for anyone on vacation. Airy Rooms' popularity in Indonesia had been shaken by the covid 19 pandemics. This culminated in the closing of commercial trips in and out of the entry. In this case, the global economy, including Indonesia, is adversely affected. Hotel-sector companies implemented a policy of temporarily laying off staff before some were forced to temporarily close.

3. Research Methodology

This research uses a qualitative approach to identify online media material related to Indonesia's covid-19 and virtual hotel operations. This study uses data from Indonesia's accurate, credible, and accountable online media. Online media data were collected and identified by similar posts in the first round of Covid-19 hit Indonesia (the end of February till April) and then analyze through Nvivo 12 plus software. By finding Indonesia's online media that are credible and can be accounted for and have a strong reputation, data collection in this study is completed. At this point, online media data using was captured using the web browser's (NCAPTURE) function. This function catch sentences in the form of a paragraph previously

Figure 1 shows a collection of words that are frequently used in online media to provide covid and virtual hotel operations (Airy rooms) information in Indonesia online media. The use of electronic media is considered easier and quicker to navigate when conveying information to customers. Though some words that use foreign languages, these words are familiar to the people of Indonesia. There are the terms "hotel," Airy," "operator," "rooms," "startup "and" covid "from the findings of the content review above, which are the object of interest for online media. It is interpreted as the aim of providing information relating to Airy rooms is a covid-affected virtual hotel operating company that is well established in Indonesia. Cloud content analysis findings are supported by previous research which indicates that the impact of this 19 tourism field, such as hospitality [26][27] is affected [28].

It's also fascinating to see an online review of cloud media content, sometimes the words "stop," "delete," "operational," "decrease," "occupancy" and "2020" appear in Figure 1. The introduction of these terms suggests that the existence of the covid pandemic 19 resulted in a decrease in hotel room occupancy bookings through the use of virtual hotel operations Airy rooms and contributed to the shutdown of Airy rooms in Indonesia by 2020. As of 31 May 2020 Airy rooms are no longer in use [29], this finding has been reinforced by online media coverage.

4.2 The Relationship Between The Covid-19 Concept and VHO (Airy Rooms) in Indonesia

Based on the online media content cluster study, researchers want to reveal the relationship between covid 19 and virtual hotel operations (Airy rooms) in Indonesia based on the correlation coefficient provided in Table 3 and visualized in Figure 2 by Pearson. The findings of the word similarity-based study indicate a correlation range of 0.6-0.7. The highest relation is 0.711 between the covid and the operator. This can be interpreted as a covid pandemic 19 currently has a significant impact on hotel booking operator companies [21], this is because people prefer to stay at home and avoid traveling and physical contact with others. This finding is reinforced by the findings of [7] the decline occurred in the tourism sector in China because prospective tourists are afraid and avoid physical contact with the Chinese population.

Table 3. The Relationship Among Covid and Virtual Hotel Operation in Indonesia

Covid-19	Virtual Hotel Operation (VHO)	Pearson correlation coefficient
Covid	Operator	0.711
Covid	Airy	0.699
Covid	Hotel	0.620
Covid	Close	0.587
Covid	Startup	0.561

The other results show the covid and Airy link. Pearson's correlation coefficient of 0.699 is seen based on word similarity analysis. It can be viewed as one of the affected is Airy with the covid-19 pandemic, which interestingly Airy is a startup company that offers online hotel reservations that bear low traveler budgets. With the presence of this pandemic, people who wish to fly are preventing fly commercially, thus rising occupancy levels in Airy rooms. This finding is supported by previous findings in the presence of covid-19 pandemic which led to a decrease in sales of hotel rooms in the tourism sector [15][22]. Certain results indicate a correlation value of 0.5 between the covid, hotel, closure and startup. This partnership can be perceived as having an impact on start-ups engaged in the hotel sector before the operational closure was completed [30]. [13] have shared the same issue, saying that the existence of covid outbreaks contributed to the instability of the tourism sector.

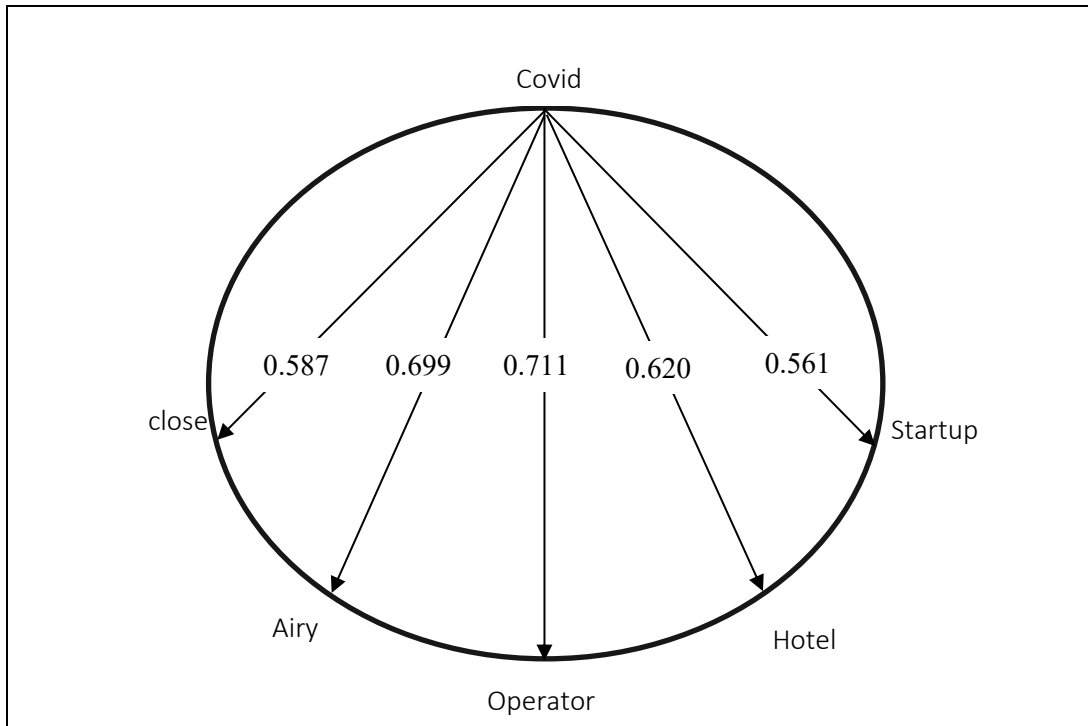


Figure 2. The Relationship Between Covid 19 and VHO (Airy Rooms)

4.3 The Linkage of Covid-19 Concept and VHO (Airy Rooms) in Indonesia

Matrix coding is used to demonstrate how covid-19 and VHO (Airy Rooms) connect content in Indonesia in Table 4. The results of the study on the highest coding matrix are found in hotels and Airy, this is meant by the business, which focuses on Airy hotel room sellers by applying the low budget model [29].

Table 4. The Result of Matrix Coding

	A : Airy	B : Covid	C : Hotel	D : Operator	E : Startup	F : Close
1: Airy	50.17%	18.24%	14%	15.95%	6.30%	15.20%
2 : covid	13.34%	43.29%	9.80%	16.81%	0.00%	9.06%
3 : hotel	19.62%	18.82%	56.60%	31.64%	13.03%	9.36%
4 : operator	11.10%	16%	15.72%	31.64%	0%	9.36%
5 : startup	1.29%	0%	1.90%	0%	62.18%	12.87%
6 : close	4.48%	3.65%	1.96%	3.96%	18.49%	44.15%

Other findings relate to start-up, user, covid and close material. This means that, because of the pandemic covid epidemic 19, a virtual activity company engaged in offering hotel booking services has undergone an operational shutdown. This result is consistent with the findings of several researchers who reported that the presence of a co-pandemic led to economic disruption in the tourism sector [4]. The collapse of the Airy Room was the biggest impact felt by virtual hotel operation startups in Indonesia. As a result of the reduction in foreign and domestic tourists due to the large-scale social restriction (PSBB) policy established by the Indonesia government, hotel occupancy rates have dropped dramatically. In areas where the largest income comes from the tourism sector, such as Bali, the recession and economic

downturn are felt by all parties, either directly or indirectly. The travel, accommodation, food and beverage, entertainment services, micro, small, medium and large sectors were closed. This has been accompanied by social pessimism about the future of virtual hotel operation (VHO) and the tourism sector. Major hospitality and virtual hotel operation are changing their services by providing a self-quarantine package with a major focus on improving health protocols in all aspects.

The government had planned an economic stimulus for the tourism sector by issuing ticket incentives for the 10 best tourist destinations in Indonesia, hotel tax compensation and tourism grants. But along with the increasing number of positive cases of Covid, the realization of this stimulus was postponed and resulted in virtual hotel operation not being able to operate. This has an impact on the inability of virtual hotel operations such as Airy Rooms which lead to bankruptcy. The effect of covid will continue to be felt by the tourism sector if it is not handled quickly. Recovery policy responses and global paradigm shifts will be key in the recovery of covid-affected sectors such as virtual hotel operation. The accommodation, food and beverage service provider sector and other sectors are equipped with improved standards of health, hygiene and safety. The new normal scheme continues to be carried out in encouraging the Indonesian tourism sector to rise. This begins with increasing the intention of local tourists which will have an impact on increasing hotel occupancy and will be continued by targeting foreign tourists.

5. Conclusion

The emergence of the Pandemic Covid-19 outbreak has led to disruption of Indonesia's economic sector, especially in the tourism sector. There is a good relationship between the relationship between covid and virtual hotel operations. The hotel sector is feeling a very big impact. Implementing large-scale social restrictions (PSBB) and closing access to commercial trips from both inside and outside, resulting in a decreased volume of hotel room bookings using virtual hotel (Airy Rooms) development operations in Indonesia. Airy rooms were closed with the covid 19 outbreak as one of Indonesia 's virtual hotel operations. The drawback of this study is that it uses only 1 source based on online media, so the findings are based on the opinions of those who offer an online media based on evaluation. This study's contribution to virtual hotel operations to pay more attention to prospective clients in the new normal age and health protocol. Potential recommendations for more work should include additional outlets so that they can and will be able to apply quantitative methods or combine process approaches to improve results.

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