The Government's Response to the Online Transportation Sub-Sector Economic Resilience in Anticipating the Covid-19 Impact: A Literature Review

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Abstract

The Covid-19 pandemic has significantly affected human life, especially in the Indonesian economy and the transportation sub-sector. This research explains the Government's response in economic resilience and online transportation in anticipating the pandemic's impact. Secondary data were analyzed using the descriptive qualitative method. The results showed that various initial responses were used to overcome the pandemic in online transportation, such as tight health protocols in customer facilities. These include purchasing PPE, medical devices, hospital upgrades, intensive doctors, and support for medical personnel by the government. Furthermore, there is an effort to strengthen economic resilience, especially for workers in the online transportation sub-sector.

Keywords: The Impact of Covid-19; Economic Resilience; Government Response, Online Transportation; Resilience Response

Abstrak

Pandemi ini membawa konsekuensi luar biasa bagi kehidupan manusia. Salah satunya pada sektor perekonomian di Indonesia. Salah satu dampak Covid-19 yang bergejolak adalah mereka yang berada pada sub sektor transportasi. Artikel ini bertujuan untuk menjelaskan bagaimana respon pemerintah bidang ketahanan sektor ekonomi pada sub sektor transportasi online dalam mengantisipasi dampak Covid-19 di Indonesia. Metode yang digunakan pada penelitian ini adalah metode kualitatif deskriptif dengan pendekatan analisis data sekunder. Berdasarkan hasil penelitian, terdapat berbagai

initial respon untuk mengatasi pandemi Covid-19 pada sektor transportasi online di Indonesia, seperti adanya pengetatan protokol kesehatan dalam fasilitas yang diberikan kepada pelanggan, seperti pembelian APD, alat kesehatan, upgrade rumah sakit, intensif dokter, dukungan tenaga medis oleh pemerintah. Initial respon pada sub sektor transportasi online merupakan upaya memperkuat ketahanan ekonomi khususnya ketahanan ekonomi keluarga pada mereka yang bekerja pada sub sektor transportasi online.

Kata kunci: Dampak Covid-19; Respon Pemerintah; Ketahanan Ekonomi; Transportasi Online; Respon Ketahanan

INTRODUCTION

The world faces the Covid-19 pandemic, an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Data from the Worldometers as of November 25, 2020 showed 60,072,538 confirmed cases of Covid-19 worldwide, 41,509,241 recovered patients and 1,413,684 deaths (Bramasta, 2020). Furthermore, 506,302 Indonesians were infected, 425,313 recovered, and 16,111 died (Bramasta, 2020).

This pandemic raised concerns globally with several countries opting for lockdowns, impacting human life. Instead of implementing a lockdown Indonesia initiated Large-Scale Social Restrictions (PSBB). Unexpectedly, there is a serious threat to Economic Resilience of Indonesia. Global economic growth declined by 2.8%, dropping to 6% from the previous period. The two institutions previously projected that the global economy at the end of the first quarter of 2020 would grow by 3% (Carrillo-Larco & Castillo-Cara, 2020). Moreover, the global spread of the virus has impacted the Indonesian economy regarding trade, investment, and tourism. According to the World Bank, the country's economic growth in the second quarter of 2020 decreased by 5.32%. The transportation, storage, accommodation, and food and beverage sectors experienced the deepest declines of up to 30.84% and 22.02%, respectively (Ocean & Setyonaluri, 2020). Furthermore, the World Bank analysis in July 2020 in *"Indonesia Economic Prospects: The Long Road to Recovery"* showed that the worst affected were workers in the transportation and construction sectors with a significant income decline (World Bank, 2020). For instance, the transportation sector experienced a drastic decline due to large-scale social restrictions or working from home policy. Therefore, appropriate action is needed to tackle this pandemic because it might cause a 2.0% increase poverty in Indonesia (International Labor Organization, 2020). The government should take quick and appropriate steps to deal with the problems caused by this pandemic.

The government implemented the Large-Scale Social Restriction Policy (PSBB) for the first time in Jakarta on April 7, 2020 as one way of handling the pandemic. This policy was implemented for 14 days with several provisions, such

as reducing electric rail train schedule and restricting online motorcycle taxis. The Covid-19 pandemic has affected economic resilience for users and partners of online motorcycle taxi, a transportation mode widely used in big cities. A survey by the Demographic Institute of the Economics and Business Faculty, University of Indonesia showed that 63% of Gojek partners did not receive income during the Covid-19 pandemic (Demography Institute, Economics and Business Faculty, University of Indonesia, 2020). This shows that the pandemic has significantly impacted economic resilience in the online transportation sub-sector. Therefore, this study focuses on this case in Indonesia.

Economic Resilience is part of the National Resilience modle of the State's Logic Representation as reflected by Natural and Social Determinants. The Natural Determinant Subsystem is represented by *Tri Gatra*, comprising Geography, Demography, and Natural Resources. In contrast, the Social Determinant Sub-System is represented by five aspects of *Panca Gatra*, including Ideology, Politics, Economy, Social Culture, and Defense. The two *Gatra* are together know as *Asta Gatra* (Ade, D.S., 2020)

The economy is an important factor in human life because people always intersect with economic needs. Due to its importance, the state must regulate policies and guarantee the economy of its community. This would ensure that people, nation, and state meet their needs. Furthermore, it would increase the capacity and quality of adequate national resources for a sustainable competitive advantage. The economy is also driven to create inner and outer prosperity based on justice for the progress and independence of a nation. As the sector mostly affected, the response to economic resilience should be considered well during a pandemic. Therefore, this study analyzes government response on the resilience of economic sector with the online transportation sub-sector in anticipating the covid-19 impact. The data processed were related on the impact of knowing online transportation during the COVID-19 period.

METHODS

This research was conducted using a cross-reference database from publish or perish *(https://harzing.com/)*. The terms or keywords used were online transportation, Covid, and Resilience, with additional criteria for journals published in 2019-2020. The use of analysis through PoP allows authors to know the potential for studies and publications related to a particular topic (Pambayun, 2021).

The cross-reference database showed that 59 articles or scientific publications on the development of transportation, Covid, and Resilience research were indexed by Google Scholar, Microsoft Academic, PubMed, Scopus, and Web of Science in 2019-2020. Therefore, several data were analyzed descriptively based on the topic.

The data were exported in EndNote (.enw) file format to obtain the research map. The export data were then processed and analyzed using the VOSViewer program to determine a bibliometric map on the development of transportation, Covid, and Resilience research.

Qualitative data were analyzed using Nvivo, a suitable computer software that codes the data from interviews, journal articles, web pages, social media, and videos into percentages in tables and graphs. Furthermore, readers easily understand the data coding using selected indicators based on the research purpose (Zamawe, 2015).

RESULTS AND DISCUSSION

A. VOSViewer Analysis

Table 1. Results of the VOSViewer program analysis on transportation, Covid, and Resilience

No	THEME	CLUSTER	OCCURRENCE	RELEVANCE
1	Resilience	1	46	0,71
2	Covid	2	39	1,63
3	Network	1	17	1,03
4	Transportation	2	17	0,53
5	Approach	1	15	0,72
6	Risk	2	14	0,19
7	Impact	2	13	0,35
8	Pandemic	2	10	2,03
9	Disruption	1	10	1,21
10	Public Transportation	2	9	1,74
11	Transportation Network	1	6	0,41
12	Recovery	1	6	0,35
13	Outbreak	2	5	1,86
14	Road Network	1	5	0,77

Source: primary data processed by researchers, 2021

Table 1 shows the results of the VOSViewer program analysis as a bibliometric map on the development of transportation, Covid, and Resilience research. Table 1 shows that the word resilience has the highest occurrence of 46, with a relevance level of 0.71. It is followed by Covid, with 39 times and relevance of 1.63, Network with 17 occurrences and 1.03 relevance, and transportation with 17 occurrences and 0.53 relevance.

The words are then mapped in the following network visualization: In network visualization, items are represented by labels, default, and circles whose sizes are determined by item's weight. In this case, heavier items

have bigger labels and circles. Additionally, the color of the item is determined by the cluster to which it belongs. The colors in the network visualization are only red and green, representing only two clusters in the analyzed journal.
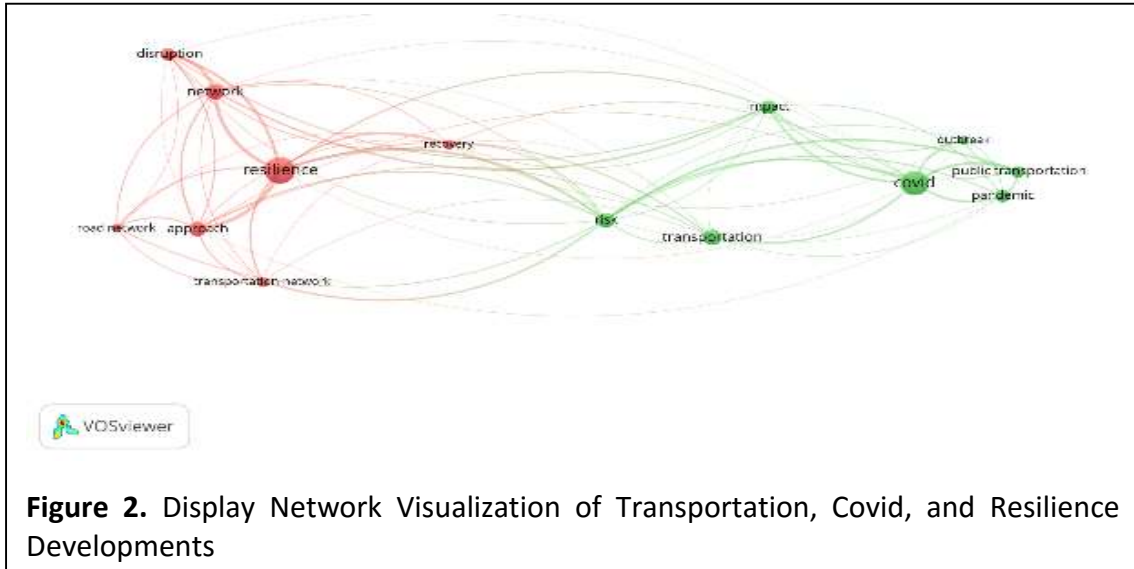

Figure 2. Display Network Visualization of Transportation, Covid, and Resilience Developments
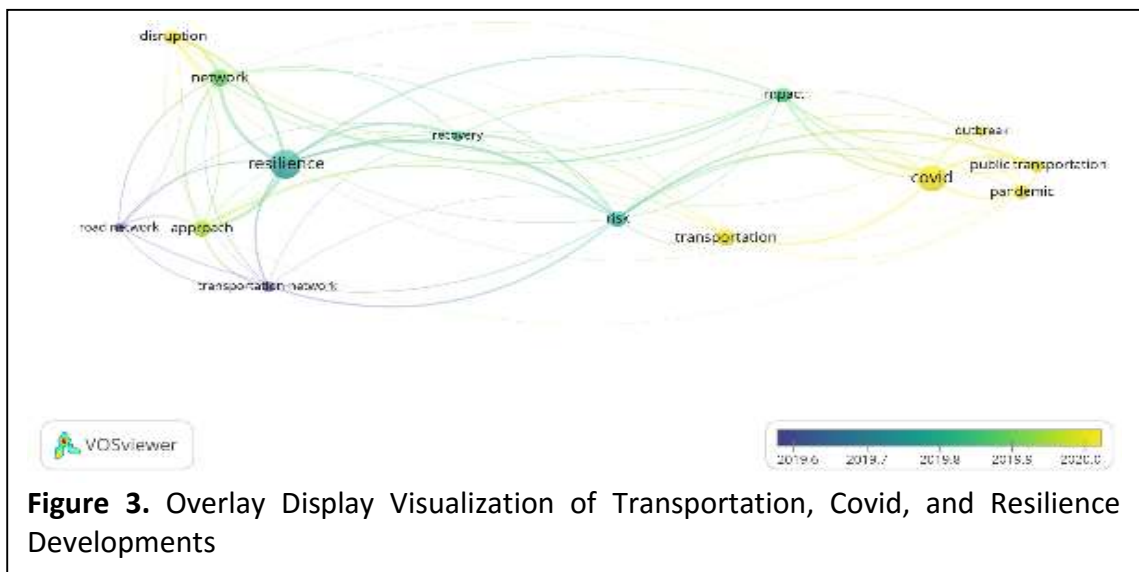

Figure 3. Overlay Display Visualization of Transportation, Covid, and Resilience Developments

represents the link, indicating that cluster 1 (with 7 items) is connected to cluster 2 (with 7 items) through impact, risk, and transportation. Also, the distance between the two journals in the visualization shows their relevance in co-citation links. In line with this, closely appearing journals have a strongest citation links between journals are also represented by lines.

The research with related themes was first developed in 2019 semester 2, with the keywords 'road network' and 'transportation network.' The last journal was analyzed in 2020, using the keywords outbreak, transportation, and

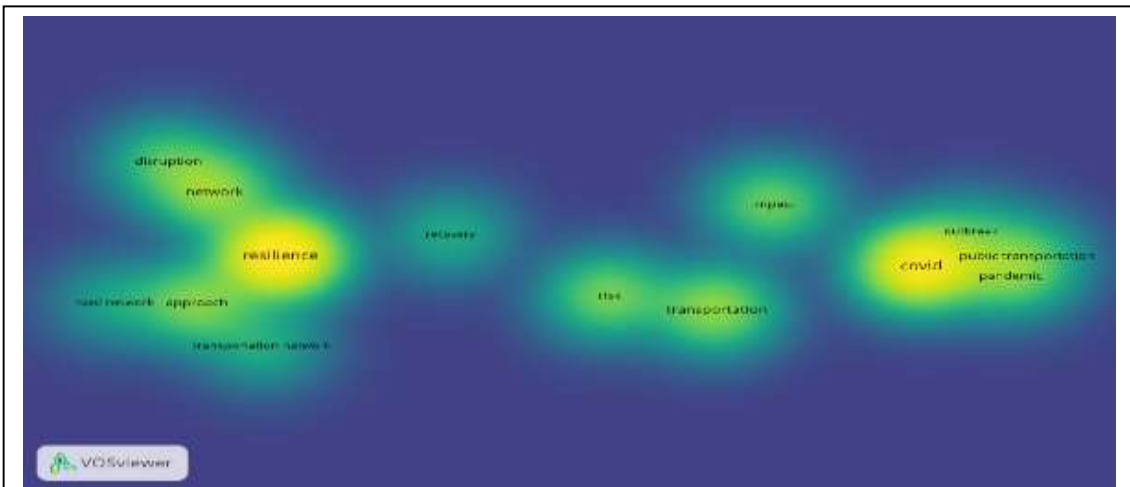pandemic, and mapping continued with
density visualization.

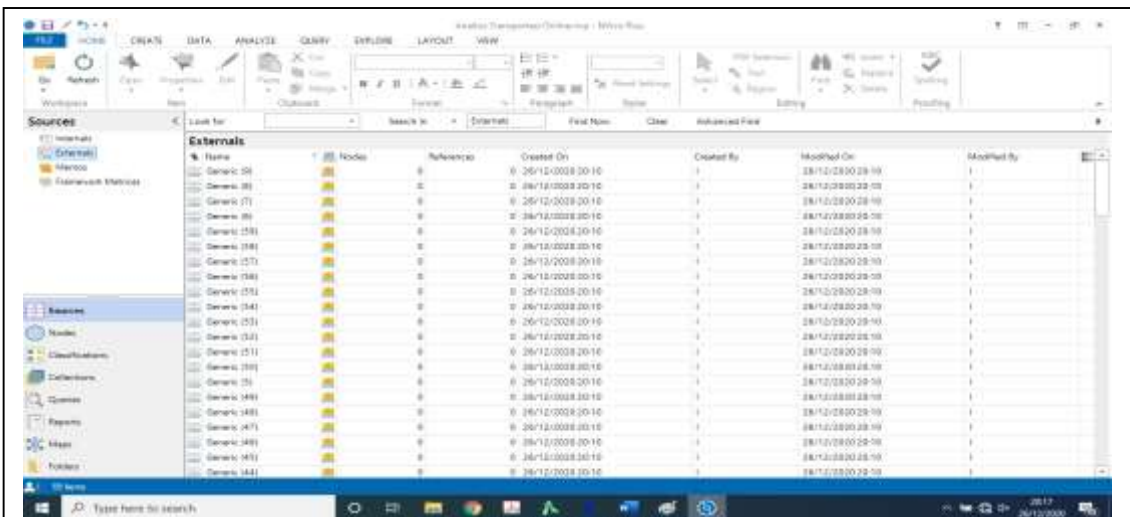**Figure 4.** Density Visualization Display on Transportation, Covid, and Resilience Developments

Figure 5. Export Cross-Reference Results from Publish or Perish into NVIVO.

The theme density is shown in green for the lowest and red for the highest. Figure 4. shows that transportation, Covid, and Resilience have a density of green to yellow, meaning that they are rarely carried out.

The results of the cross-reference database analysis from publish or perish and VOSViewer were then analyzed further using NVIVO.
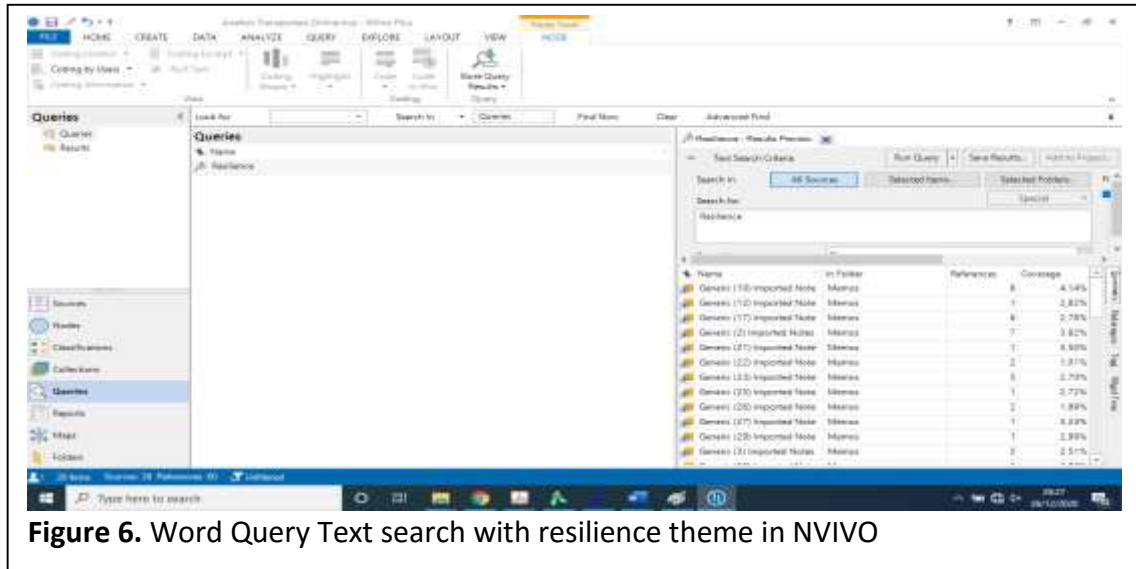
B. *NVIVO* Analysis

Figure 6. Word Query Text search with resilience theme in NVIVO

The cross-reference database from publish or perish comprises 59 articles or scientific publications on transportation, Covid, and Resilience research developments. The articles or publications were indexed by Google Scholar, Microsoft Academic, PubMed, Scopus, and Web of Science in 2019-2020 and then exported to NVIVO. A text search query analysis was performed for 14 themes found in VOSViewer to be used as nodes in the NVIVO analysis.

Table 2. The results of the NVIVO program analysis with the theme of transportation, Covid, and Resilience

NAME	SOURCES	REFERENCES
Thema Transportation, Covid, and Resilience	0	0
Cluster 1	0	0
Approach	4	12
Disruption	3	7
Network	10	41
Recovery	5	10
Resilience	28	60
Road Network	5	7
Transportation Network	2	4
Cluster 2	0	0
Covid	31	41
Impact	5	6
Outbreak	5	6

Pandemic	12	17
Public Transportation	3	15
Risk	9	22
Transportation	42	72

Source: primary data processed by researchers, 2021

Figure 7. Hierarchical chart of themes in NVIVO

The results of the Word Query Text search in NVIVO were then coded into nodes, consisting of clusters 1 and 2, as shown in Table 2:

Tables and figures show sources or journals discussing the COVID-19 theme in cluster 2 (31 journals) and resilience in cluster 1 (28 journals). They are the most frequently mentioned themes in data source journals.

The themes with the highest sources and references in Table 2 are transportation and Covid, with 31 and 42 sources, respectively.

The two themes were cross-analyzed to and found 26 journals discussing the effects of Covid on transportation. However, after detailed examination, only 11 journals were related to the theme of the Response of the Economic Sector Resilience Online Transportation Sub-Sector

Table 3. The analysis results of the journals relevant to the theme Anticipating the Covid-19 Impact.

NO	RESEARCH	RESEARCH RESULT
1	Arellana, Julian *et al.* (2020)	Transportation was the most resilient component in the first three months of COVID-19 outbreak. Also, freight travel was reduced by about 38%, mainly affecting the supply chain of non-essential products.
2	GÜLER, İlkay (2020)	In Turkey, CO_2 emissions are considered negative environmental externalities. Therefore, input-output analysis is conducted in all sectors in and measures, policies, and recommendations are evaluated specifically for the transport sector. The production input components are not significantly different from the calculated Spearman Correlation.
3	Zhou, Huiyu *et al.* (2020)	Data from the Ministry of Transportation in February showed that during the peak of the outbreak, the number of public transport passengers dropped by 15% compared to the previous year. Public buses, trams, and trains were only 12.0% and 14.7% of their number in the same period in the previous year. However, the transportation and logistics system is operating, and workers often return to work earlier compared to other sectors. Furthermore, the industry is finding various online and off-line ways to continue their business even during the pandemic
4	Godstime Nwaeze (2020)	The transportation industry is one of the areas of human activity most affected by this pandemic. The revenue deficit prompts the government to increase the next annual budget allocation for this sector. This would revitalize the sector and enable it to address the global demand for human mobility, transport, and information and communication technologies. Furthermore, it would increase the industry efficiency and help other sector's development, increasing its income.
5	Selminaz Adigüzel (2020)	Airline companies halted most of their aviation activities by restricting transport and closing their borders. This situation led to a decrease in revenue, increased financial losses, and impact on other sectors related to aviation. Therefore, the Chinese government would support air cargo operators that need to lease or purchase cargo. Furthermore, it support express delivery companies to expand air services and overseas operations.
6	Tirachini, Alejandro *et al.* (2020)	The economic and social effects of Covid-19 on public transport extend beyond service performance and health risks to financial viability, social equity, and sustainable mobility. There is a risk that the public transport sector would be strengthened and possibly sustained in case it transits poorly to a post-pandemic state.

7	Divyesh Patel *et al.* (2020)	The airline industry may need funding to pay salaries and keep operations running. Additionally, the business would need nearly $220 billion to endure the storm of Covid-19 infections. The outbreak would continue to have an impact on India's economy, trade, and tourism.
8	Xiaoqian Sun *et al.* (2020)	The evolution of the domestic airport network focusing on passenger traffic for representative countries or regions indicates a different perspective and partial asynchronousity. Europe has probably experienced the most significant changes regarding network connectivity, while the United States has suffered less and China seems to be recovering. Correspondingly, the evolutionary dynamics of the domestic airport network are closely correlated with the Covid-19 situation in certain countries.
9	Laura Aline *et al.* (2020)	Passenger transportation is linked to economic development and depends on tariffs and government subsidies. Therefore, the challenges faced by companies today are related to short-term service continuity and maintenance. Another challenge is how to balance themselves in the medium and long term financial restructuring, which requires assistance from public authorities.
10	Verma, Ashish *et al.* (2020)	Conditions prevailing in several countries range from Covid-19 statistics, availability of health facilities, mobility situation, to air quality index. These conditions indicate the need for Interventions to ensure that the transportation sector regains public trust by ensuring all safety protocols, such as social distancing, are followed during travel.
11	Jajam Haerul Jamana *et al.* (2020)	Online transportation is a new trend widely used by the lower to the upper class in Indonesia. Many customers shared their experiences with the online transportation service durint the peak of the Covid-19 pandemic. The analysis results show that the Covid-19 pandemic does not lower trust in online transportation services.

Source: primary data processed by researchers, 2021

The results from the 11 journals show that during the first three months of Covid-19, transportation was the most resilient component. However, reduced freight travel mainly affects the supply chain of non-essential products.

When the most severe outbreak occurred, the total volume of passengers on public transport, buses, and trains decreased from last year. However, compared to other sectors, the transportation and logistics system continues to support operations, and workers return to work early. The industry is finding various online and offline ways to continue their business even during the pandemic.

The transportation industry is one of the areas of human activity most affected by this pandemic. The revenue deficit means the government should pay more attention to this sector by

increasing the next annual budget allocation at all levels. This would revitalize the sector to address the global demand for human mobility, transport, and information and communication technologies. Moreover, it would increase the industry's efficiency and help develop other sectors, increasing its income.

The airlines stopped most of their flight activities by first restricting transportation and then closing their borders. This situation reduced the airline industry's revenue, increased financial losses, and other sectors related to aviation.

The economic and social effects of the Covid-19 outbreak on public transport extend beyond service performance and health risks to financial viability, social equity, and sustainable mobility. There is a risk that the public transport sector would be strengthened and possibly sustained in case it has a poor transition to a post-pandemic state, it.

Online transportation in Indonesia is a new trend currently widely used by the lower to the upper class. When the Covid-19 pandemic was seriously spreading, many customers expressed their experiences with the online transportation service. The analysis results show that the Covid-19 pandemic did not reduce trust in online transportation services.

C. Response of Economic Resilience on the Online Transportation Sector

The first case of Covid-19 in Indonesia occurred in early March 2020, a little later compared to other countries. Initially, the government had not taken any special steps to deal with this pandemic. However, the increase in patient cases prompted the Government to take several special policies in handling Covid-19. These included issuing Government Regulation on Law Number 1 of 2020, concerning State Financial Policy and System Stability for Handling the Covid-19 Pandemic to anticipate threats to the national economy and financial system stability. The regulation was issued on March 31, 2020, with a budget of IDR 405.1 trillion to anticipate the impact of Covid-19 (Ministry of Foreign Affairs, 2020). Furthermore, on April 3, 2020, the President issued Presidential Regulation Number 54 of 2020 concerning Changes in Posture Details. This was followed by the 2020 State Budget by cutting several government budgets by IDR. 97.42 trillion. Furthermore, the Ministry of Education and Culture budget was increased from IDR 36 trillion to IDR 70 trillion, while that for the Ministry of Health was increased from IDR 57 trillion to IDR 76 trillion (Ministry of Foreign Affairs, 2020).

The Government has taken various initial responses based on the two laws and restrictions, such as forming the central and regional Covid-19 Task Forces. The budget for the health sector is IDR 75 trillion for purchasing PPE, medical equipment, hospital upgrades,

medical support, and training intensive doctors. Moreover, the budget for the social sector is IDR 110 trillion to provide basic needs and necessities, pre-employment cards, and exemption from electricity costs. The Government issued a policy of Large-Scale Social Restrictions on March 31, 2020, through Government Regulation Number 21 of 2020 (Ministry of Foreign Affairs, 2020).

Online transportation is essential in the economic sector, especially in big cities with high mobility. However, this sector is impacted by The Large-Scale Social Restrictions policy that limits people's mobility.

In 2019, the number of Gojek partners reached approximately 2 million (Demographic Institute, Economics and Business Faculty, University of Indonesia, 2020). Gojek's economic contribution is IDR 8.2 trillion per year through the income of driver-partners based on the gross domestic product (GDP). Furthermore, the production value produced by the Gojek digital ecosystem was equivalent to 1% of the national GDP in 2019 (Walandouw et al., 2020). The Covid-19 pandemic impacts economic resilience based on the number of gojek partners and the contribution of online transportation (Nurjanah, A., Mutiarin, D., & Kasiwi, A. N. 2021). In line with the World Bank analysis in July 2020 in *"Indonesia Economic Prospects: The Long Road to Recovery*," the most affected were workers in the transportation and construction sectors with a significant income decline (World Bank, 2020). This shows that the pandemic has significantly impacted economic resilience, especially in online transportation.

The economic sector is experiencing the most obvious impact during this pandemic. One of the breakthroughs made by the Government towards economic sustainability is to increase people's purchasing power. The pandemic has reduced people's purchasing power after implementing Large-Scale Social Restrictions. Therefore, the Government provides social assistance through the Ministry of Social Affairs to increase the purchasing power and defend the community's economy. This assistance comprises basic needs and necessities, pre-employment cards, and the Hope Family Program (PKH)(Kasiwi, A. N., Nurmandi, A., Mutiarin, D., & Azka, M. F. 2021). Furthermore, the response to economic resilience involves policies by the government and online transportation service providers. The program taken by the Government is a relief for delaying vehicle installments for driver-partners, though it is impossible to account for clarity and realization.

Service providers carry out various initial responses by providing social assistance through cash, necessities, and facilities to support their health and safety. According to an online media Tirto.Id, Grab and Gojek spent 40 million US dollars and IDR 100 billion, respectively, to help their partners financially during this pandemic (Zaenudin, 2020). Furthermore, resilience responses were carried out by various parties in this sector. The Demographic Institute at the University

of Indonesia conducted the *"Research Report on the Gojek Driver Partner Experience Survey During the Covid-19 Pandemic."* Although assistance came from the government and companies, the results showed that various parties, such as consumers and fellow partners or workers also provided help (Demography Institute, Economics and Business Faculty, University of Indonesia, 2020). Therefore, the response to economic resilience in online transportation involved cooperation from various parties.

CONCLUSION

The bibliometric analysis on the transportation, Covid, and Resilience themes using a cross-reference database from publish or perish, obtained 59 articles or scientific publications. These articles or publications were indexed by Google Scholar, Microsoft Academic, PubMed, Scopus, and Web of Science in 2019-2020. However, after a detailed examination, only 11 journals were found related to the theme of the response to the resilience of the Economic Sector with the Online Transportation Sub-Sector in Anticipating the Impact of Covid-19.

The results from 11 journals show that transportation was the most resilient component during the first three months of Covid-19 outbreak. Reduced freight travel mainly affects the supply chain of non-essential products. The pandemic did not reduce trust in online transportation services, including in Indonesia.

The policy of Large-Scale Social Restrictions reduces the income of workers in online transportation, affecting their economic resilience. Therefore, a response is needed while ensuring the workers' health and safety. Economic resilience is mostly ensured by government policies and companies providing transportation services. The response is carried out by the workers themselves, the government, transportation service providers, and other related parties. Therefore, mutual economic cooperation is the keyword for the response to economic resilience in the online transportation sector during the Covid-19 pandemic.

This research needs regular updates to determine what is happening in online transportation.

ACKNOWLEDGMENT

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