

## IMPACT COVID 19 PANDEMIC ON THE 4.0 SERVICE INDUSTRY (CASE STUDY ONLINE TRANSPORTATION GRAB IN KUPANG CITY)

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### ABSTRACT

This explanatory study seeks to explain the impact of celebrity endorsement and reputation of the @OOTDFESS Forum as exogenous factors on customers' purchase intentions as endogenous variables. Using the questionnaire, the data was collected from 100 millennials aged 20 to 40 who are reside The Covid 19 pandemic had an impact on the world economy so that economic growth in countries has contracted. Indonesia did not escape the contraction of economic growth for 2 quarters. Indonesia has established large-scale social restriction policies to overcome the spread of Covid 19 for each of its regions, as well as Kupang City, East Nusa Tenggara. Almost economic sector was affected by the contraction in economic growth. This study aims to analyze the impact of the Covid pandemic on the service industry 4.0, especially Grab's online transportation service which operates in Kupang City. This study uses primary data by distributing questionnaires to 130 respondents of Grab car and Grab bike partners. The results of paired t tests of 130 respondents showed a significant difference in the demand and income variables before and during the Covid 19 pandemic. The consequences of the Covid 19 pandemic on demand for online grab transportation services have decreased and have an impact on reducing the income of grab car or grab bike partners.

Keyword: Covid-19 Pandemic, 4.0 industry transportation, Grab

### INTRODUCTION

The increasingly rapid development of the world economy in the digital era demands changes in every business sector. These demands have an impact on structural changes in the economy, where an economy based on a conventional system has turned into an economic system based on digital technology. This encourages economic actors, namely producers and consumers to adapt to these changes. The digital era economy forms a change in the form of transactions between producers and consumers, where consumers can transact in real time and practically without having to visit the store in person. Consumers do not have to bother going

around looking for the desired item, because it can be done by utilizing digital technology and only need to wait for the goods purchased to arrive in the hands of consumers through intermediaries.

The ease of making transactions using digital technology or what is known as the on-demand economy also provides benefits and benefits for producers as business people. On demand economy creates efficiency in terms of cost and time for producers which in turn reduces production costs for producers. For consumers, this economic model is able to answer their needs, because it offers comfort, speed, and practicality in an effort to meet their needs. Meanwhile, for

providers of goods and services, this economic model provides concessions because they can select and sort out working hours to meet growing consumer demand. The use of digital technology in the economy has led to an industrial revolution from conventional to digital economy-based industry.

Indonesia has experienced a conventional economic transformation into a digital economy starting from industry 1.0 to industry 4.0 which encourages innovation by carrying out a digital transformation strategy by making comprehensive changes to each production process until the strategy for delivering goods to end consumers, another benefit of having industry 4.0 creates connectivity between economic sectors. The impact of economic growth is increasing in industry 4.0, seen from the number of business people taking advantage of the development of digital technology to run their business, besides that it also encourages job creation for new entrants in the economic sector.

The Industrial Revolution 4.0 led to the emergence of various business opportunities or job creation in the service industry. One of the service industries that has developed with industry 4.0 is the transportation service industry. This can be seen by the number of online transportation such as Go-Jek, Grab and Uber. The emergence of various online transportation service industries has created jobs for people who can increase their income. This then encourages economic growth to increase, where online transportation makes the mobility of people and goods smoother and faster.

The development of the online transportation service industry has

occurred in all regions of Indonesia, including East Nusa Tenggara, especially in the city of Kupang. With a population of 446,193 thousand people, Kupang City is one of the potential market segments for the online transportation service industry. This can be seen by the presence of Grab in Kupang City.

Grab is an online transportation service company that has contributed significantly to the Indonesian economy. Based on the results of research conducted by the Center for Strategic and International Studies (CSIS), the grab has contributed as much as IDR 48.9 trillion. From these results, we can see in Figure 2 that grabfood helps increase sales and market access for MSME partners by 25%, GrabBike and GrabCar create new job opportunities by 29% and 36% respectively.

The presence of Grab in Kupang City is a driving force for increasing income for the people of Kupang through GrabBike and GrabCar, where people can become Grab driver partners and use Grab to help increase sales and market access for MSME partners in Kupang City. The use and utilization of the digital economy through Grab can generate demand for food products or services and will encourage an increase in people's income and ultimately encourage an increase in the economic growth of Kupang City.

The service industry 4.0, especially in the technology-based online transportation service industry, is increasingly developing at the moment it must face new challenges, namely the Covid 19 pandemic, which is a disease pandemic that has occurred throughout the world including the city of Kupang and has caused many casualties. Until now,

nationally the Covid 19 pandemic has caused 49,009 people to suffer from Covid 19, 2,573 people died, and the condition of Kupang City 34 people suffer from Covid and 1 person died. Covid 19 is a disease that is transmitted very quickly and can cause death in people who do not have strong immunity. As a result of this disease, the Indonesian government has handed over the authority to each region or province to propose preventive measures so that the virus does not spread by implementing large-scale social restrictions.

This large-scale social enactment has also been carried out by the Kupang City government, which certainly has an impact on the regional economy. Where the people of Kota Kupang are prohibited from carrying out activities outside the home and maintaining distance between humans, one example is the implementation of Work From Home and the temporary closure of business places to limit social interaction between the people of Kota Kupang. The implementation of this PSBB certainly affects the economic business sector in Kupang City.

Based on the description on the background above, the team of authors formulated the problem that became the basis of the study as follows: How is the Impact of the Covid 19 Pandemic on the Service Industry Case Study of the Grab Online Transportation Service Industry in Kupang City?

## **LITERATURE REVIEW**

### **Economic Growth**

Economic growth in a region will depend on several things including the amount of investment, public consumption or demand, and

government spending. As an illustration, if there is an increase in government spending, it will encourage the creation of new job opportunities which in turn will increase people's income. If people's income increases, it will also affect the demand for goods and services. This will encourage producers or companies to produce more goods and services and then there will be an increase in national output. So, the higher the economic growth, the higher the level of economic activity, which means the more prosperous the people in an area will be.

In microeconomics, market equilibrium occurs when the quantity of goods demanded (demanded) equals the quantity of goods offered (supply). If the amount of demand decreases, and the supply of goods remains constant, there will be excess supply. Vice versa, if the demand is constant and the supply falls, there will be excess demand. (Sukirno, 2014). Both of these conditions result in market imbalances. And, if the demand and supply both experience a decline, then the market balance will experience a change or a downward shift (experience a decline). This will result in a reduction in the number of items used to meet the needs of human life and will affect the level of individual welfare.

Macro, changes in the amount of aggregate demand and supply will affect the level of economic activity in a certain period which in turn will also affect national income or national production (GDP-Gross Domestic Product). One of the indicators of the good and bad economy in a region is by looking at the level of economic growth.

### Service Industry 4.0

The industrial revolution is a fundamental change in the way of life and work processes of humans, where advances in information technology can integrate the world of life with digital which can have an impact on all disciplines. With the development of information technology that is developing rapidly, there are breakthroughs, including in the field of artificial intelligence, where computer technology is a discipline that adopts one's expertise into technology-based applications and creates information technology and production processes that are controlled automatically. With the birth of digital technology, currently in the industrial revolution 4.0, it has an impact on human life around the world.

The industrial revolution 4.0 process is carried out in an automated system in all activation processes, where the development of internet technology is increasingly developing not only connecting people around the world but also becoming a basis for the process of trade and transportation transactions online.

Today, consumers are spoiled for transaction services that are *real-time*, easy and practical, without having to visit the store in person. Consumers don't have to bother going around looking for the desired item, because it can be done through their smart phone. You only need to wait a few moments until the courier delivers the item he ordered. *On demand economy*, which is translated as an economy based on demand, is an economic model driven by technology that allows businesses to meet consumer demands immediately. In

addition, the *on demand economy* can also be understood as an economic activity created by digital markets and technology companies to meet consumer demand through direct access to goods and services.

As a current economic model, the *on-demand economy* is fully supported by technology, either through a *smartphone* or an internet connection, because everything from this economic model, from ordering goods or services to their delivery, is done in *real-time. online*. This makes the *on-demand economy* publicly accepted, because it provides a fast, practical, and efficient experience in accordance with changes in consumer behavior who want things quickly. It's no wonder that this economic model is growing rapidly and significantly.

Technological developments are increasingly developing, there are many emergence of online transportation businesses such as Go-Jek, Uber and Grab, which show the integration of human activities with information technology, resulting in increased economic growth. In the era of the industrial revolution 4.0 conventional transportation has never been predicted that this model of conventional transportation was previously widely used by the public for the benefit of human mobility, but in the era of the industrial revolution 4.0 this conventional transportation model has been slightly used by the community, which can be seen between taxis. conventional versions of online taxis or base motorcycle taxis with online motorcycle taxis, with technological developments that are increasingly developing rapidly, conventional transportation models using an internet-based application

system to become a means of transportation used by the community for the benefit of human mobility, the impact is that the public is easier to get transportation services and even at a very affordable price.

### **Covid 19**

Covid-19 is a disease caused by the SARS CoV-2 virus and has symptoms similar to the common cold, which can lead to severe illness and pneumonia (pneumonia), causing difficulty breathing. Corona virus causes common cold to more severe illnesses such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). This virus spreads quickly and has spread to several countries, including Indonesia.

Covid-19 has a major impact in almost all aspects of life including the economy. To overcome this storm, various countries are struggling to overcome the impact of the Covid-19 outbreak apart from coordination, important actions to limit the spread of the Covid-19 pandemic and overcome the socio-economic consequences are steps such as: it is important to pay attention to the production and distribution value chain to ensure certainty the necessary supplies; ensure that income and employment opportunities are not affected by the pandemic; support for affected companies, especially Small and Medium Enterprises (SMEs), cooperatives, and informal sector businesses; guaranteed supply and availability of food stocks. We must respond together to slow down transmission, strengthen the resilience of the health care system so that the Covid-19 outbreak can be resolved quickly.

## **METHODOLOGY OF THE RESEARCH**

To answer the problem of how the impact of the Covid pandemic on the Grab online transportation service business sector in Kupang City, a quantitative descriptive analysis tool and inference were used.

This research uses descriptive research type with a quantitative approach. Quantitative Research Methods, research methods based on the philosophy of positivism, are used to examine specific populations or samples, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing predetermined hypotheses. Descriptive research, that is, research conducted to determine the value of the independent variable, either one or more (independent) variables without making comparisons, or connecting with other variables. Based on this theory, quantitative descriptive research is data obtained from a sample of the research population analyzed according to the statistical method used.

**Validity and Reliability Testing Techniques** The validity of the instrument is the accuracy in measuring the aspects of the instrument to be measured. The validity of the instrument defines the items of the instrument exactly in terms of what they want to reveal. The validity of the instrument can be divided into two, namely internal and external validity. In this study, testing the internal validity of the instrument items was carried out by three experts on the proposed research, to make judgments on the research instrument. Test the validity by correlating each item score with the total score, using the Spearman Ranks formula

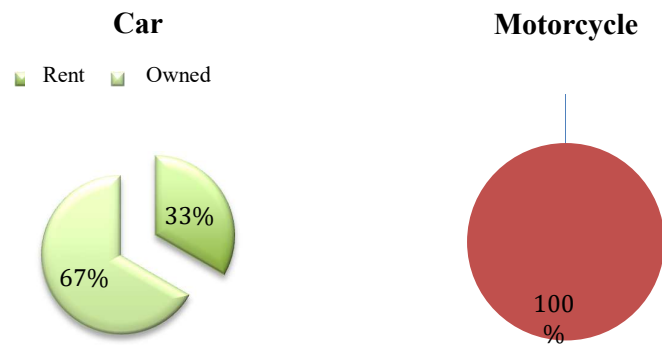
Processing and data analysis in this study using descriptive statistical techniques and statistical analysis t test or different test (t test) with two means (paired-samples t test) with a test tool using SPSS 21 software. Descriptive statistics provide an overview or

description of a data seen from the mean (mean), standard deviation, maximum

and minimum. Analysis of the t test (t test) was used to test the hypothesis.

## RESULTS AND DISCUSSIONS

The ages of the respondents consisted of the age range of 19 to 40 years, most of whom were in the productive age according to BPS, namely in the age range of 15 - 64 years, and at the productive age the grab partner had obtained a license to drive a vehicle, either four-wheeled or two-wheeled. Most grab partners are dominated by male as many as 110 people and female as many as 20 people.

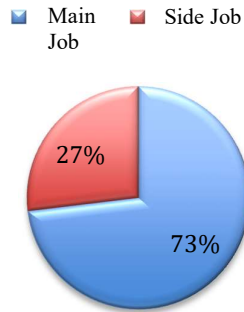


Source: processed data

**Figure 1. Vehicle Ownership**

Of the 130 respondents, partners of grab cars (four-wheeled vehicles) consisted of 60 respondents and the remaining 70 respondents were grab motor partners (motorized vehicles). Ownership of vehicles used by grab partners consists of privately owned vehicles and leased or rental vehicles. Based on Figure 1 above, it can be seen that the vehicles rented or rented are dominated by car grab partners, while 100% ownership of motorized vehicles is the respondent's personal property.

The online transportation service industry provides many facilities for transportation service users, so that when Grab entered Kupang City in mid-2018 it created employment for 423,800 people. Most of the respondents, either Grab Car or Grab Bike, have started their partnership within 3 years. Along with the increasing enthusiasm of the people of Kupang City in using Grab's online transportation services, it encourages an increase in labor absorption, therefore grabbing is the main job for 95 people and for 35 people Grab is a side job to get additional income outside of income.



Source: processed data

**Figure 2. Sources of Income**

Based on Figure 2, it can be seen that Grab (either Grabbike or Grabcar) is the main source of income for 73 percent of respondents and a side source of income or a source of additional income for 27% of the respondents.

**Table 1. Wilcoxon Difference Test Results**

Variabel	Z Calculate	Asymp.Sig. (2-tailed)
Demand before and during Covid 19	-9.584	0.000
Income before and during Covid 19	-9.699	0.000

Source: processed data

Based on table 1 above, the results of the paired sample output estimation using the Wilcoxon test, it is known that the demand variable before and after Covid 19 has a z value of -9,584 with a p value (Asymp Sig. 2-tailed) of 0.000 smaller than the critical limit of the study (level significance) 0.05 (5%) so that the hypothesis decision is to accept  $H_a$  or which means that there are differences between groups of requests for online transportation services both grabcar and grabbike before and during Covid 19.

From the results of the Wilcoxon difference test, it is known that the income variable before and after Covid 19 has a z value of -9,699 with a p value (Asymp Sig. 2-tailed) of 0.000 smaller than the critical research limit (significance level) 0.05 (5%) so the hypothesis decision is to accept  $H_a$  or which means that there are differences between income groups on online transportation services, both grabcar and grabbike before and during covid 19.

The difference between demand and income before and during Covid 19 can be interpreted through the Wilcoxon ranks results in the following table:

**Table 2. Ranks Wilcoxon Result**

	N	Mean Rank
Demand during Covid 19 -Negative Ranks	121 <sup>a</sup>	62.79
Demand Before Covid 19 Positive Ranks	2 <sup>b</sup>	14.25
Ties	6 <sup>c</sup>	

	Total	129	
Income During Covid 19	-Negative Ranks	123 <sup>d</sup>	64.83
Income Before Covid 19	Positive Ranks	3 <sup>e</sup>	9.17
	Ties	3 <sup>f</sup>	
	Total	129	

Source: processed data

Based on the results of the Wilcoxon ranks test, it can be seen that the demand for online grab transportation services during the Covid 19 pandemic was smaller than before the pandemic with the number of respondents experiencing a change in demand as many as 121 people, an average rating of 62.79, an increase in demand during Covid 2 people average rating of 14.25 and 6 people did not experience changes in demand. This means that when a pandemic occurs, Grab partners experience a decrease in demand for transportation services. This was caused by a pandemic which was then accompanied by preventive measures issued by the government to implement Large-Scale Social Restrictions, thus limiting the mobility of the inhabitants of Kota Kupang.

As for the income variable during and before the COVID-19 pandemic, 123 people experienced a decrease in income with an average rating of 64.83 and 3 respondents experienced an increase in income during the Covid 19 pandemic and 3 people whose income during the COVID-19 pandemic was the same as the income before the pandemic. When the demand for the use of Grab's online transportation services has decreased, it has an impact on decreasing income from grab partners because customers or service users spend more time at home to comply with the Large-Scale Social

Restrictions (PSBB) regulations issued by the government.

### Discussion

The service industry 4.0, especially in the technology-based online transportation service industry, is increasingly developing at the moment it must face new challenges, namely the Covid 19 pandemic, which is a disease pandemic that has occurred throughout the world including the city of Kupang and has caused many casualties. Until now, nationally the Covid 19 pandemic has caused 49,009 people to suffer from Covid 19, 2,573 people died, and the condition of Kupang City 34 people suffer from Covid and 1 person died. Covid 19 is a disease that is transmitted very quickly and can cause death in people who do not have strong immunity. As a result of this disease, the Indonesian government has handed over the authority to each region or province to propose preventive measures so that the virus does not spread by implementing large-scale social restrictions.

This large-scale social enactment has also been carried out by the Kupang City government, which certainly has an impact on the regional economy. Where the people of Kota Kupang are prohibited from carrying out activities outside the home and maintaining distance between humans, one example is the implementation of *Work From Home* and



the temporary closure of business places to limit social interaction between the people of Kota Kupang. The implementation of this PSBB certainly affects the economic business sector in Kupang City.

The Covid 19 pandemic has had a significant impact on various economic sectors, including the online transportation service industry, one of which is grab. The online service industry Grab, both Grab Car and Grab Bike, provides services to passengers directly to be delivered to the passenger's destination, but due to the Covid 19 pandemic, demand has decreased. This is because the spread of Covid 19 can occur through interactions between humans and the spread of this disease is very fast. Therefore, the government implements a Large-Scale Social Restriction policy and advises people not to gather in one place, not to travel to crowded places such as shopping centers, tourist attractions, restaurants and working from home to minimize the spread of covid 19. This of course limits economic activities of the community, and have an impact on Grab partners, either Grab Car or Grab Bike, where there is a decrease in demand for online transportation services. In the demand theory, there are various external factors that can affect demand, one of which is extraordinary events such as the Covid 19 pandemic.

Based on the results of the covid 19 pandemic research, it has a negative impact on demand, meaning that when the case of Covid 19 is getting higher, it will encourage the demand for online grab car or grab bike services to decrease. The result of the decrease in demand will reduce the income of grab bike and grab car partners. To overcome the decline in

community income, the government has implemented various policies ranging from providing direct cash assistance and providing guarantees to workers by implementing health protocols.

## CONCLUSION

This large-scale social enactment has also been carried out by the Kupang City government, which certainly has an impact on the regional economy. Where the people of Kota Kupang are prohibited from carrying out activities outside the home and maintaining distance between humans, one example is the implementation of *Work From Home* and the temporary closure of business places to limit social interaction between the people of Kota Kupang. The implementation of this PSBB certainly affects the economic business sector in Kupang City.

The Covid 19 pandemic has had a significant impact on various economic sectors, including the online transportation service industry, namely grab bikes and grab cars. The results of the covid 19 pandemic research have a negative impact on demand, meaning that when the case of Covid 19 is getting higher, it will drive demand for online grab car or grab bike services to decrease. The result of the decrease in demand will reduce the income of grab bike and grab car partners. The right policy not to impose lockdowns and replace them with PSBB reduces the impact of the economic downturn. However, it cannot be avoided that the Covid 19 pandemic has directly affected the regional economy where there has been a direct decline in income from service industry players.

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