The potential of problems on operational Go-Jek and Grab Bike

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Abstract. Go-Jek and Grab is one of transport mode that popular within society. They have the system that supports efficiency of their services. Although there are benefit for user and operator, but their operation is often creating problems to the users. In some cases, it is also creating problem in the environment. The purpose of research is to identify the potential of problems on operational Go-Jek and Grab Bike based on analysis operational performance and the operational system. This research was conducted based on qualitative analysis methods, the data was obtained using in deep interview to the drivers, potential problem on operational Go-Jek and Grab Bike was determined based on Logical Framework Analysis (LFA) method. The result shows that operational Go-Jek and Grab Bike has potential of problems in future on drivers, users, company, government and services.

1. Introduction
Since Grab bike and Go-Jek operate using smart phone application in 2015, now this mode of transport is very popular in Indonesia. This mode of transport serves many features that most of them are needed by people [1-3]. Because of the popularity, this mode of transport has spread in more 100 cities in Indonesia within 4 years. Although, this transport mode is not regulated in UU No.22 Year 2009 [3] but government cannot avoid the reality that people like using this services. This mode of transport is conducted by the system that could benefit to the user, operator and driver [4,5]. Although, the operation of Go-Jek and Grab Bike has several benefit to the stake holder, but they are also often causing problem in the site. In the previous time, there are many cases of conflict between Go-Jek or Grab Bike and other stake holders [6], it showed that operational activities Go-Jek and Grab Bike disturb other environment. Another, cases transit driver avoids operational of Go-Jek and Grab Bike, see Figure 1 and 2.

Figure 1. Go-Jek driver waiting order at trotoar [7].

Figure 2. Transit drivers avoid operational Go-Jek [8].
Figure 1 shows that Go-jek driver park their motorcycle at *trotoar*, it could disturb environment. Figure 2, shows transit rally to avoid operational Go-jek and Grab Bike, because operational Go-jek and Grab Bike reduce their income. This research explores the potential problems on operational Grab bike and Go-jek based on the contract system condition and operational performance.

2. Methods
The research uses qualitative approach. This method was used to identify the driver profile and characteristic, also measure of operational performance. Survey was conducted on 100 Go-jek and Grab Bike drivers in Padang. Deep interview using revealed preference was conducted to explore driver’s characteristic and operational characteristic of Go-jek and Grab Bike. Interview was conducted in the site, during the driver waiting order. The potential problems of Go-jek and Grab Bike operations were determined using Logical Framework Analysis (LFA) approach [9]. The input for analysis is Go-jek and Grab Bike company system [5,6] and driver profile. The output is Go-jek and Grab Bike performances [10]. From these interactions, the potential problems were identified [11].

3. Results and discussion
Analysis from collected data, the driver profile and driver operational characteristics have been identified, Go-Jek and Grab Bike operational expense and revenue are also identified. The result is explained as follow.

3.1. Driver profile
In order to identify the profile of Go-jek and Grab Bike drivers, several questions have been addressed to them, the result of analysis is shown in Figure 3 - 6.

![Figure 3. Driver age.](image1)

![Figure 4. Driver education degree.](image2)

![Figure 5. Marital status.](image3)

![Figure 6. Driver main profession.](image4)
Figure 3–6 shows that majority drivers are 20-40 years age graduate from senior high school, more than half of them are married, and the main profession is private business and university students.

3.2. Operational characteristic
Several parameters of operational characteristic have been identified, below Figure 7-12 show the distribution of data from each parameter of operational characteristic.

Figure 7. Driver work in spare time.

Figure 8. Driver working length.

Figure 9. Driver working limit.

Figure 10. Reason working as driver.

Figure 11. Working time.

Figure 12. Working day.

Figure 7-12 show the distribution of data each parameter of operational Go-Jek and Grab Bike drivers. The number of driver work in spare time is relatively high, it is about 33%. Majority of drivers is working for about 12 hours, 7 days at more than 6 months, and half of them work for temporary as Go-jek and Grab Bike drivers. Most of them work as drivers because their income not enough for daily need. This condition shows that majority Go-jek and Grab Bike driver work as a driver because of life difficulties to cope daily needed.
3.3. **Operational expense and revenue**

From the interview to the driver, the average daily expense and revenue have been identified. The distributions of those data are as shown in Figure 13-18.

![Figure 13. Average daily income.](image1)

![Figure 14. Average daily passenger.](image2)

![Figure 15. Menu request by passenger.](image3)

![Figure 16. Average daily expenses.](image4)

![Figure 17. Average daily expense for fuel.](image5)

![Figure 18. Average point achieves by driver.](image6)

Figure 13 - 18 shows that about 70% driver has daily income more than Rp 150,000,-, and more than 70% drivers has more 15 passengers daily. High number of services order come from Go-Ride, Go-Send, Go-Food and Go-Shop. About 50% of daily Go-jek and Grab Bike drivers expense between Rp 50,000,- to 60,000,-, most of their expenses is for fuel, it is about Rp 20,000,- to Rp 30,000,-. Another income is obtained by point that achieve by driver. Number of points is calculated based on the number of service that have been completed. From analysis, 57.74% of driver has the highest point (30), they will receive bonus about Rp 140,000,-. Therefore, they will obtain the income from service order and bonus. Majority they has daily income more than Rp 200,000,-.
3.4. Potential problems of operational Go-Jek and Grab Bike

Analysis potential problems of Go-Jek and Grab Bike operational were conducted using principles of Logical Framework Analysis (LFA). This method analyse the system company and operational performance of Go-jek and Grab Bike, then the potential of problems on operation Go-jek and Grab Bike was determined. The potential of problems in the future has been identified as follow:

3.4.1. Drivers

- High number of drivers works as part time job, they would be away after accept better job. The government also implement limited period number of recruitment for Go-Jek and Grab Bike. This could be a problem for the Go-Jek and Grab Bike Company for balancing the demand and supply of services.
- High number of driver work for 12 hour or more, this is not good for driver health for the future.
- Go-Jek and Grab Bike Company still could not detect the driver who conducted the service, this system is vulnerable to be misused. This would be dangerous for the user.

3.4.2. Users

- Motorcycle actually is not appropriate for public transport, this service has high risk of accident, and all risk of operational is on the responsibility of drivers, this would be problem for the drivers and passenger if severe accident occurs.
- Passenger sometime is served by driver using old motorcycles, old uniform and bad performances, company could not detect their real services, they only control their feedback service from the star that tick by passenger.
- Go-food and Go-send service usually conducted directly by driver using their package. For long distance service, the package is often damage or the condition of package is change, this would decrease service level.

3.4.3. Company

- High income of company is depending on high number of service, this would need high number of drivers. However, high number of driver working would decrease driver income, this could be a problem for the company. Another problem, there are high number of driver work at Go-Jek and Grab Bike that work as part-time worker or temporary.
- Padang government determine limited of driver recruitment period, this could reduce company income when high number of driver is required for high demand of services.

3.4.4. Government

- Several regulations from government are still violated by drivers, because police or local government official has not authority to ban operational Go-Jek and Grab Bike, this condition would be possible occur in the future.
- Local Government still has difficulties to control the number of Go-Jek and Grab Bike driver that operate in their cities, they have no access the real number of Go-Jek and Grab Bike driver that operate everyday. Even though local government has requested the operator to limit new driver recruitment.

3.4.5. Services

- Efficiency of service depending on the number of motorcycle fleet, high number motorcycle would be better for passenger and company, but bad for driver income. This condition would be critical aspect of Go-Jek and Grab Bike operational condition.
- Quality of service still could not fully have controlled by company, the service still works although they run by another driver or using another motorcycle.
Driver riding quality and motorcycles condition are too varied, this would produce high different level of service.

From the result of Logical Framework Analysis, it can be concluded that in the future, the problems could occur if the company and partner less control, miscommunication and has unbalance implementation the policy. If those problems occur, it could produce a rally that disturb the environment and produce traffic congestion [12]. The company should prepare several scenarios to avoid those potential problems in the future.

4. Conclusion
Operational Go-jek and Grab Bike has several benefit to driver, user and operator, however this transport service has a lot potential of problem to them. Several potential of problems on driver relate to the driver profile, driver operational characteristic and company management. Potential of problems on user usually relate to driver operational characteristic, and potential of problems on company relate to driver profile, then potential of problems on government relate the authority to control operational Go-jek and Grab Bike in the site. For the potential of problems on service Go-jek and Grab Bike, it relates to operational management by company. The cause of potential problem is a contract system between driver and company, then operational regulation that push the driver to get maximum services without consider of driver conditions, also operational and safety control that could not save user from fraudulency. Other factor that could contribute creating problem is driver profile conditions. All those conditions could produce potential problem to driver, user, operator and government in the future. Several scenarios to solve those problems should be prepared by company and government early, so they could tackle those problem easily if occur.

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