Ramp check examination evaluation of public transport business

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Abstract. The ramp check is needed to check the condition of each bus fleet before it operates, especially in the Pulo Gebang Terminal, which is one of the class A terminals in DKI Jakarta. Based on preliminary observations, only 9.16% of the bus fleet passed a ramp check from the total number of fleets in operation. A sequential strategy approach with mixed research methods is used in this study. This research is evaluation research using the Goal-Oriented Evaluation model approach. The object of the case study is the process of supervision of the ramp check to the bus fleet at the Pulo Gebang terminal. The sampling method used is purposive sampling. In terms of the quality of the ramp check supervision process for the bus fleet at the Pulo Gebang Terminal is included in the top category. Whereas, if seen from the number of fleets in operation with the number of fleets that have gone through the inspection, the ramp check is in a low category.

1. Introduction
Development in the city area is directed at solid regional spatial planning with efforts to increase the geographical productivity of the region and the efficiency of local resources through the regulation of spatial use, which includes transportation systems. Vukan Vuchic defines urban public transportation as "Transport system (s) for intra-urban or intra-regional travel available for use by any person who pays the established fare" [1]. Meanwhile, according to The American Public Transportation Association (APTA) defines public transportation as "transportation by a conveyance that provides regular and continuing public or special transportation to the public" [2]. Therefore, the continuity of transportation service available in meeting the needs of production, consumption, and distribution activities must receive ongoing attention. Continuity of the availability of transportation services in all regions is essential because the strategic function of transportation is to create stability and continuity of community activities and the wheels of government.

The density of private vehicles on the streets, one of which is due to the suboptimal existence of public transportation. A user from the transportation system is a passenger who seeks assistance about moving from one place to another. This simple daily activity deals with the complexity of multimodality of transportation, i.e., the possibility of using multiple modes of transport (bus, metro, etc.) for a single journey between an origin and a final destination [3]. The existence of adequate public transportation can have a profound impact on the changing behavior and culture of the transportation of its people. Conversely, if public transportation is ignored. Especially if the public is excessive using private
vehicles, such as causing traffic jams, and adding to the number of traffic accidents. Based on data from the National Police, 107,500 traffic accidents occurred in 2019, an increase of 3 percent from 2018, which was 103,672 accidents. For this reason, each terminal must prioritize safety for its passengers.

Several things must be checked before an albus fleet departs. First, the condition of the bus driver, seen from the completeness of the administration and the health condition of the driver himself. This is by McLay, who states that traffic accidents often occur because the driver fails to see or respond to obstacles that arise during driving [4]. Meanwhile, based on data from the National Police Headquarters, the factors that cause traffic accidents include:

![Factors Causing Accidents](image)

**Figure 1.** Factors causing traffic accidents.

This is where the role of Ramp Check is highly considered, especially at the Pulo Gebang Integrated Terminal, which is the largest Type A terminal in Jakarta and even Southeast Asia. As a passenger terminal, Type A Integrated Terminal Pulo Gebang serves inter-city inter-provincial transportation (AKAP), inter-city within the province (AKDP), and urban transportation. The purpose of the operation of the Pulo Gebang AKAP Terminal is to reduce congestion in the capital city of Jakarta, by providing transportation infrastructure that is convenient, safe, and fast. In providing convenient, safe, and fast transportation facilities to passengers, Pulo Gebang Terminal always ensures vehicle health and safety as well as ensuring travel meets roadworthiness regulations. Ramp Check is a routine inspection carried out by the Operational and Partnership Implementing Unit of the Department of Transportation's Pulo Gebang Integrated Terminal Management Unit for each bus fleet that will operate. Ramp Check checks the condition of a fleet in terms of braking, lighting, speed measurement, safety belts, emergency exits, and other equipment that must be owned by the bus fleet in maintaining the safety of the passengers. Based on literacy studies, evaluation research on the implementation of ramp check checks on bus fleets has never been done. It is hoped that this research can be the basis for the importance of the ramp check on the bus fleet.

2. Literature review

Transportation comes from the Latin word, which is transport is, where trans means the opposite or the other side, and portable means to transport or carry. Transportation, in its simple meaning, is to carry passengers from one point to another [5]. Transportation can also be interpreted as a process of activities that transport or carry something from one place to another. Wikibooks' Fundamentals of Transportation / Transit defines public transit as "a mode of transportation that involves moving persons from one place to another using a common form of conveyance, allowing multiple persons to share a common vehicle while traveling" [6]. Transportation is an important domain of human activity. It supports and makes possible most other social and economic activities and exchanges [7]. Planning for a sustainable transportation system is a complicated task that involves a high degree of uncertainty due to several reasons: (a) a large number of alternative potential policy packages, (b) the way of implementation and (c) the travelers' response to each of these policy packages [8]. When talking about the travelers' response, many aspects will be involved. One of them is the quality of service on public transportation. According to Todd Litman, the quality of service on public transportation consists of the reliability, safety, and comfort provided by the bus fleet for its users [9].
Ramp Check is a routine inspection carried out by the Operational and Partnership Implementing Unit of the Department of Transportation's Pulo Gebang Integrated Terminal Management Unit by the Minister of Transportation's Instruction No. 1 of 2015 concerning Passenger Safety in the Mode of Transportation to ensure vehicle worthiness and safety and ensure travel meets roadworthiness regulations. The examination carried out is based on the Director-General of Land Transportation Regulation No: SK / .5637 / AJ.403 / DRJD / 2017 [10] includes administrative checks consisting of vehicle identity or documents in the form of a driving license card, Kir test certificate and supervision card. Meanwhile, for the technical inspection of vehicles including lighting systems, braking systems, glass, tires, glass erasers and other supporting technical tools. Also, examinations are carried out on the driver. The driver must not consume drugs and alcohol, not severe hypertension, hypoglycemia, or hyperglycemia.

3. Research methods
The purpose of this study was to evaluate the performance of the inspection process carried out by the ramp check of the bus fleet at the Pulo Gebang Terminal. This research was conducted at the Pulo Gebang Terminal, Jl. Pulo Gebang, Cakung, East Jakarta, DKI Jakarta 13950. Evaluation is based on the Guidelines for the Implementation of Traffic Safety and Road Transportation Inspections. Data collection is done by looking directly at the condition and situation of the object under study using observation sheets, questionnaires, and interviews with related parties. Test the validity of the questionnaire using the Product Moment correlation formula followed by reliability testing using the Cronbach Alpha formula. Whereas for determining the sample size in this study using the purposive sampling technique with a total of 50 respondents consisting of ramp check officers, terminal heads, admins, and bus fleet operators. The data that has been obtained is processed in the form of tables, graphs, and figures. The selection of a descriptive qualitative research method is intended to obtain results that describe in detail the actual process of the ramp check inspection at Pulo Gebang Terminal.

4. Research results and discussion
The research questionnaire consisted of 26 statements relating to the "Evaluation of the Process of Ramp Checks on the Bus Fleet," which contained the ramp check inspection process both administratively carried out to the bus driver and the inspection process of the bus fleet itself.

![Figure 2](image_url)

**Figure 2.** Results of analysis of questionnaire about officers and ramp check routines.

Based on the data obtained, the ramp check is done every day at the Pulo Gebang Terminal. However, the implementation is only targeted at 20 bus fleets per day. This is consistent with the results of the questionnaire data with a percentage of 62%, so it can be said that not all operating bus fleets receive ramp check checks. The ramp check process is carried out by the examining officer or inspection team consisting of motor vehicle testers and Civil Servant investigators. The ramp check officer is the result of coaching conducted by the Directorate of Safety Guidance determined by the Decree of the Director-General of Land Transportation by the results of the questionnaire percentage of 89% in the top category. The Ramp Check officer at Pulo Gebang Terminal consists of 3 terminal officers and three examiner
from BKO Jagakarsa. Ramp-check operation hours start at 07.00 - 16.00 WIB. But in reality, the inspection of the ramp check can only begin around 09.00 WIB due to waiting for the arrival of the testing team from the BKO Jagakarsa as the testing team. The interview results explained that the time needed to do a ramp check on a bus fleet takes 15 minutes. So, the ramp check should be done on 36 bus fleets a day. However, this could not be done, where the Ramp Check examination was only able to carry out a 9% inspection of the total fleet of buses in operation. The 96% ramp check includes administrative and technical tests.

![Figure 3. Percentage of ramp check examination achievement.](image)

The administrative inspection process by the ramp check of the bus fleet driver includes the examination of the Driving License, including the category often done with a percentage of 81%, followed by the investigation of the Vehicle Registration Certificate with a percentage of 80% including the frequently performed type. At the examination of Vehicle Number Certificate, the engine number and frame number of the vehicle must be by the physical vehicle. The Ramp Check officer also checks the Evidence passed Periodic Test and Supervision Card (KP). Execution of examination of Evidence passed Periodic Tests, and Supervision Cards (KP), including the category, is always done with a percentage of 86%. The condition of the bus fleet drivers has also examined the status of the driver, which is proven by the percentage of questionnaires of 75%, including the frequently performed category. Drivers of the bus fleet must not consume drugs or alcohol, not severe hypertension, hypoglycemia, or hyperglycemia, as evidenced by a certificate of physical and mental health from the doctor before operating.

![Figure 4. Results of analysis of questionnaire regarding the process of administrative examination by a ramp check officer against bus fleet drivers.](image)
The process of examining the main technical elements in a bus fleet at Pulogebang Terminal is carried out carefully which includes inspection of the lighting system with a percentage of 86%, braking system inspection with a percentage of 87%, vehicle body inspection with a percentage of 90%, tire inspection with a percentage of 89%, and equipment inspection (safety belt) with a percentage of 85% with the category always done. In addition to examining the main technical elements, also checking speed measuring devices and emergency response with a percentage of 80% and examining a wiper with a percentage of 81% the category is often done.

The process of examining supporting technical elements on a bus fleet carried out by Ramp Check at Pulogebang Terminal includes inspection of lighting systems (position lights) at a percentage of 82%, seating capacity at a percentage of 76%, vehicle bodies (mirrors, horns, floors, stairs) with a percentage of 70%, and other vehicle equipped with a percentage of 72% including the category often done. Bus fleet drivers who do not meet administrative requirements will be penalized in the form of speeding tickets with 76% application. Sanctions for the prohibition of departure are given for buses that do not meet the main technical requirements given with a percentage of application of 73% and buses that do not meet the technical support requirements 2x in a row with an error equal to the percentage of 70% application including the many categories. The results of the ramp check will be inputted through Sigobang (Pulogebang Integration System) with the percentage of application of 88%, including the
always implemented category. Sigobang (Pulo Gebang Integration System) is an online technology system that can facilitate the Pulo Gebang Terminal in compiling reports on the implementation of ramp checks to the Department of Land Transportation.

5. Conclusions and recommendations
Based on the results of the evaluation of the ramp check inspection process for the bus fleet at the Pulo Gebang Terminal, it was concluded that the regular ramp check inspection was carried out but only able to check 9% of the total number of buses in operation. This is because the number of supervisory teams consisting of only four members is unable to conduct an overall inspection of the buses that are operating. The ramp check officer is by the Decree of the Director-General of Land Transportation by the results of the questionnaire percentage of 89% in the top category. In the implementation of the ramp check examination, the administration elements are in the good category with an average percentage of 82%, the main technical elements in the 85% category are perfect, and the supporting technical elements in the 75% category are good. The application of sanctions for drivers and bus fleets that do not meet the administrative requirements for ramp checks in terms of administration and technology are included in both categories, with an average percentage of 73%. The results of the ramp check will be inputted through Sigobang (Pulo Gebang Integration System) with a percentage of application of 88%, including the category always carried out.

Suggestions
Based on the conclusions obtained from the evaluation of the process of checking the ramp check of the bus fleet at the Pulo Gebang Terminal, there was no achievement of the ramp check officer in inspecting the bus fleet before operating. Given the importance of the role of the ramp check to ensure the safety of transport transportation, especially during the homecoming. For this reason, it is necessary to add a ramp check officer to be able to adjust to the number of buses operating.

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