

# Public Policy on Safety and Security Railroad System in Indonesia

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**Abstract.** Implementation of the new law on railways are yet to be seen due to government regulation as executors being discussed. Government regulations mandated by Law No. 23, 2007 set as fast as 1 (one) year from the entry into force of the Act. Nevertheless in his closing conditions stated that at the time the Act came into force. All the implementing regulations of Law No. 13 1992 declared still valid this does not contradict or replaced under the Act contained in Law No. 23 of 2007 in line with the implementation of regional autonomy and decentralization intended by the Act No. 32 of 2004 on Regional Government and Government Regulation No. 38 2007 on delegation of authority from central to local governments. The quality of rail services, especially in economy class lately felt worse. Headway uncertain security condition, and the level of safety continues to decline. Train accident rate continues to rise, where in 2007 there were 116 accidents, an increase from the 2006 total of 107 times. More than 90% of accidents that occurred in 2007 caused by a Train derailment or overturned.

**Keywords:** policy, safety, railway passengers.

## 1 Introduction

In the provision of railway management responsibilities should not all be under the central government, but can be decentralized to regional governments, particularly for domestic passenger services. It is intended to bring rail transport services by rail users. The local government as the regulator and organizer of railway transport is expected to further improve service quality, as well as to integrate the rail transportation system with a network of transportation modes other cities so that the efficiency and effectiveness of service can be improved.

Components in the depot were imported from more than eight countries; eg rail from Japan, carriage from Japan and Germany, lathe from France, and the locomotive from America. The diversity of Train components causes difficulty in treatment, because not all of the specifications of existing components in accordance with the needs and conditions of the rail network in Indonesia. The inability of PT TRAIN (Indonesia Railways Persero) in

determining the appropriate components and similar in order to better facilitate treatment railway technology due to the procurement of infrastructure and facilities under the authority of the Department of Transportation. Therefore, various components of the existing Trains, the cause of the accidents caused by means of railway transport mode is very easy to understand. So that the cause of the accident from the means of transport to get the largest portion of that 34% of all causes of accidents existing Trains. NTSC in the year 2017 has delivered a variety of causes of railway accidents [1].

### Formulation of the Problem

- a. How the system of Government policy in ensuring the safety of passengers?
- b. How the transportation system able to function as a public service?

### Special Purpose Research

The specific objectives of this study are as follows:

- 1) Collecting data Train accident during the period of 2014-2017.
- 2) Calculating the rate of accident on railway accidents in the period Year 2014-2018.
- 3) Classify the various factors causing Train accident during the period 2017-2018
- 4) Analyzing the causes of railway accidents in the period Year 2016-2018

### Urgency (Virtue) of the Research

Private vehicles, especially cars is a mode of transport that is not efficient due to the low passenger levels. The transport system is designed for car use is inefficient, especially because of the use of space and a low operating speed to achieve optimal system. From this perspective, it is understandable why the government is seeking ways to implement policies that aim to reduce the use of private vehicles and supports modes of transport that are more environmentally friendly such as public transport by Train (commuter Train, tram or monorail) [2].

Train is an alternative transport which had an advantage, it is competent to serve as a transportation solution in the problem of congestion. Because Train has haulage and relatively efficient using fuel and land compared to other vehicles. In Table 1.1 it can be seen below that the Train has an advantage compared with other modes of transport.

Table 1. Advantages Train Against Other Transportation Modes

Criteria	Train	Car	Motorcycle	Bus	Unit
Use of Land	0.37	0.47	0.2	0.57	Ha / Billion Km-PNP
Energy consumption	135	765	425	965	Kcal / Km billion-PNP
Air pollution	19.6	387.5	247	587.5	Gram Co-eq / Km-PNP
Noise	16.5	23.5	12.5	33.5	% impact
Security level	0.8	20	14	12.5	KCl / Billion Km-PNP
Social costs	14	78	44	24	% transport fee

Source: East Java Provincial Transport Department (2010)

Train facilities superior in energy consumption of air pollution, security level, and social costs. While the category of land use and noise, Train had ranks in 2nd compared with other transportation modes. For haulage, Train also has a special specification. For the transport of goods, it could take up to 10 carriages which is equivalent to 20 containers of 20 feet for one trip. As for the transport of railway passengers were able to accommodate 800 people for a departure. For cities with a population over 1 million, for example Surabaya, it is most definitely help decrease congestion number of Surabaya when the passengers of private vehicles to switch to mass transit such as Trains. From the above explanation, it shows how important the railway for the transport system Indonesia in times to come [3].

This is because in the future, the Ministry of Transportation has launched a multi mode integration of freight and passenger consisting of buses, Trains, ships and airplanes. As for the mode of transportation cars and motorcycles are not related to the proposed multi mode integration as has been proclaimed by the Ministry of Transportation. This is evidenced by the impartiality of the government for car and motorcycle modes related to rising gasoline premium of Rp. 4.500, - to Rp. 6.500, - in the year 2017. The increase in fuel prices will continue till the government does not bear the burden of subsidizing fuel prices continue to soar on the world market.

At the National Medium Term Development Plan III (2017 - 2019) stated that the Government through the Ministry of Transportation will meet the availability, reliability and accessibility of efficient transport infrastructure and PPP scheme (Public Private Partnership) productive. Implicitly, an efficient transport in this case is the railway that results of this study also support the National Medium Term Development Plan of the Ministry of Transportation from 2017 to 2019.

Ministry of Transportation in RPJMN III 2017 - 2019 also plans to support the Indonesian economy strong and advanced by holding a transport infrastructure and reliable services. The phrase reliable services is related to the safety and security of the railway system in Indonesia. Train role will be increasingly important in the years to come, so we need a public policy development related to safety and security of the railway system in Indonesia which will be appointed for particular goals.

### **Innovation Targeted**

Innovation targeted in this study is to support the safety and security of the railway system in Indonesia. Train in recent years often in scapegoats as a mode of transportation that is often experienced such accidents fell from the rail, Train collisions and collisions with other modes of transport such as cars and motorbikes or trucks. Minimum service standards for mass transit is linked with departures and arrivals precise, security crime and safety in railway passenger and freight Trains to various accidents that may occur (Infid, 2008: 10). While that happen within this decade is still the news of the accident and the level of safety of passengers and goods using railway transportation services [4].

Public policy related to safety and security of the railway system in Indonesia is very important because the Train is one of the leading mode of transportation future will be prioritized by the Government to address the high incidence of accidents on highways and toll roads. Public policy is also very important because it indirectly when the level of safety and security using the railway is very high, then the personal vehicles do not hesitate to choose the railway as a mode of daily transport and will lead directly to a reduction in the level of congestion in major cities in

Indonesia. Train also reliable for transport of goods and passengers in large numbers which of course will support the construction and development of science and technology Socio-Cultural.

## **2 Research Methods**

### **Flow Chart Research (Fish Bone Diagram)**

In the Year 2013, the research team conducted a study identifying the urban transportation system planning policies Surabaya. This research resulted in that to Surabaya, which already has a population of 3 million, the research team recommends urban transport ideal is to utilize modes of transport trams, previously never existed until 1976 for the corridor north - south of Surabaya and suggested the construction of monorail tracks for corridors east - west Surabaya.

In 2014, the research team has been studying the prioritization of railway policy in East Java province. This study resulted in that the government has not siding fully on road-based public transport ie railway tracks. So that the budget allocation for the development of railway infrastructure is still very limited. It makes railway services for passengers and goods have not reached the ideal level. So that passengers still prefer to use transport cars and motorcycles to make visits to various cities in East Java. It certainly would cost the country in terms of subsidies [5].

For the years 2019 - 2021, the research team will conduct research with the title as follows:

1. 2019: Public Policy Priorities About Safety and Security Systems Railways East Java, the research sites: East Java Province, the measured results indicators: The formation of policy documents Railway Safety and Security Systems in East Java.
2. 2020: Proposed Policy Land Transport Safety and Security in East Java Province, the location of research: East Java Province, the measured results indicators: The formation of policy documents Land Transport Safety and Security in East Java province.
3. 2021: Proposed Management System Development and the National Transportation in East Java, the research sites: East Java Province, the measured results indicators: Establishment of document Proposal Management System Development and the National Transportation in the province of East Java.

## **3 Result and Discussion**

### **Railways in Indonesia**

Railway means of transport such as vehicles powered by motion, either walking alone or coupled with other vehicles, which will or is moving on rails. Train is a means of mass transportation that generally consists of a locomotive (vehicles with running own dynamics) and circuit wagon or carriage (coupled with other vehicles). The series of Trains or carriages are relatively wide so as to accommodate the passengers and goods on a large scale. Because of its nature as an effective mass transit, some countries try to utilize the maximum as the primary means of transportation overland transport both within the city, intercity, and between nations [6].

### **Indonesia Railroad Conditions**

The Train is one of mass transportation, Train their purpose is to facilitate the movement of people or goods in bulk. Thus, the function of railways for public services. But there are still many problems or challenges still faced by railways. The balance in the public interest, means service not only pay attention to commercial interests, or serve only partially certain segments of society, but also for public services and all segments of society. There are 4 main railroad pillars namely: safety, punctuality, service and comfort.

There are several of its products:

1. Kereta Api (TRAIN) Passenger, which is divided into three classes (Executive, Business and Economics).
2. Train Travel, to support tourism, PT. Kereta Api (Persero) provides services charter a special Train tours are also a variety of purposes such as meetings, weddings, birthdays, etc. on top of Railways towards various destinations.
3. Goods Trains, Trains specially tailored to the specifications of the product, which is PT. Kereta Api (Persero) has a carriage that is used for coal, pulp, Crude Palm of oil, fuel, container, Parcel BHP, Over Night, Cement.
4. Asset Utilization, addition of Passenger Transport and Freight, PT. Kereta Api (Persero) also empowers non-production assets to be commercialized to external parties. Some products rental of non-production assets.

In Java, there are three main service traffic, namely: Jakarta-Bandung, Jakarta-Semarang-Surabaya (called across the north), and Jakarta-Yogyakarta-Surabaya (called across the south). While in Sumatra, there are three sub-networks TRAIN separated from each other namely: a sub-network of northern Sumatra, a sub-network of West Sumatra, and a sub-network of southern Sumatra.

Indonesian railroad conditions is experiencing a cyclical decline. Although some modern locomotive has been said, but the Trains management system is still very bad. This is evident from the management of railways is not maximum. There are a lot of poorly maintained locomotives, Train cars so dirty and unfit for use, to the poor condition of the rail. Public services are also lacking professional, is evident from the inability of PT. KAI (Indonesian Train Persero)overcomes the explosion of passengers that occur every day. PT. KAI has not been able to become a facilitator for people in public transport. Supposedly PT. KAI must find a solution ofthe overcomes that could cause injury or death, if the cargo Train beyond normal limits to the number of passengers riding on the roof of Railways. However railways in Indonesia still have to be developed in the future, both for long-distance transportation as well as at the local level. However, the problem is quite disturbing railway today is the high rate of accidents [2].

Quite the high loss of life and socio-economic losses due to the Train accident has caused the service image and railways management declined. Safety performance increasing the demand and the attention that must be improved. The cause of the high rail accident is an accumulation of many factors, including regulatory issues, management, infrastructure conditions and facilities. Railroad facilities include locomotives, Trains, cars, KRL (Electricity Train), and KRD (Diesel Train). Rail road infrastructure that exists today in general are still single track. New double track is available in the Jakarta-Cikampek, Jakarta-Bogor, Padalarang-Bandung, and Surabaya Kota-Wonokromo. Existing rail line has a load of between 9 to 18 tons, which is capable of supporting Train speeds between 60-110 km / h. Length of the railway in Java that still operated along 3. 216

km and in Sumatra along 1,348 km. Most of the track condition was less worthy of operation so it is prone to accidents. In order to reduce the number of railway accidents, Train safety factor issue the highest priority, to establish improved safety there are four strategies as follows:

1. Reducing the frequency of Train accidents by maintaining the quality of infrastructure and facilities, as well as related quality of human resources.
2. Control of passengers on the roof of the Train through law enforcement and sterilization station.
3. Application of No Go Item explicitly.
4. Socialization safety culture.

If the strategy to reduce the level of accidents is only normative as has been done previously which does not reflect a sense of crisis, the efforts to suppress the accident rate will not be effective.

### **Railway Services in Indonesia**

Service is something that really determines the comfort of the community which will influence the interest of the community to choose the public transportation equipment that will be used. If the service provided is bad, it will minimize the interest of the community to use the transportation. while if the service provided is good, it will increase the interest of society. Particularly railroad field in Indonesia, many services provided related to two aspects, namely services intra (within) and extra services (outside) Trains. Although different, but both of these things are interrelated in increased convenience for rail users. If just one of these aspects that look good, it can be ascertained degree of comfort and satisfaction Train service users in Indonesia will remain low. Each period, the operator of rail services in Indonesia continues to clean up and improve their services. One way that has been done by PT. KAI is to provide ticket booking services using the online system. This method is used so that people no longer need to spend time waiting in line for hours just to get a ticket. In addition other forms of reform undertaken by PT. KAI is to open a new class, namely AC (Air Conditioner) economy class. This class is indeed a very powerful breakthrough to increase the interest of the community to use the services of PT. KAI.

Even so there are still many things that the society should be corrected. Starting from ticketing system. Although it uses the online service system, but the public is not satisfied. Because it is still inadequate number of tickets given to the public. It can be seen from the facts on the ground. There are still many passengers stranded due to lack of public knowledge about this online system [7]. If the services provided by PT. KAI has been able to serve the community to provide satisfaction in accordance with what was expected, while that of services provided can be said to be satisfactory.

### **External Services Railway**

One of the facilities is provided relating to the railway is the railway station to place the up and down of passengers. According to Law No. 23 Railways Train station as referred to in paragraph (1) letter b serves as the Trains leaving or ceasing to serve:

1. Up and down passengers
2. Loading and unloading goods; and / or
3. Requirements for train operations

Article 133 Paragraph (1) of Law No. 23/2007 mentions in organizing the transport of persons by rail, organizer of the railways facility shall prioritize the safety and security of persons, services in the public interest, to adhere to the scheduled departure of the Train. In Article 137 of the same law states the transport services by rail must meet minimum service standards ranging from service at the station of departure, en route, to arrive at the destination station. But the implementation is still a lot of complaints from consumers regarding SPM KRL (Train Minimum Service Standard). (Yudi, 2012)

For the situation of railway companies who have recently suffered a setback, service and infrastructure also contributed to decline in quality. Starting from ticket selling service, safety, comfort, order and the attitude of the station attendants. The decline in service at the station is influenced by several factors, among others, the lack of discipline of both officers and passengers, or catastrophic natural factors and individual behavior that is in the station. The security must be considered in the station includes crime that threatens the security of the property. It is given that in the crowd of passengers at the station there is the thief that threatens possessions passengers. In addition to the crime, and broad platform helped shape a contributing factor to the decline in the level of security at the station.

#### **Internal Services Railway**

Mirroring both the poor quality of service can be seen from the facilities on the Train. Although Trains have their own classes (economic, business, executives), all class must equally meet the standards of passenger comfort and satisfaction. Especially rail has the distance away. Comfort must be considered in comparison with rail travel is near.

#### **Solution Problem Railways in Indonesia**

Raised the issue of the problems mentioned above is derived from a trivial matter to an issue which requires further treatment. Problems are resolved gradually to prioritize urgent. The solution may soon be done is, rejuvenation of aged railway with handling technicians in detail to the whole Train, from the Train body, engine, until the supporting facilities in the Train. Route system is an important factor in the improvement. With state of the rail that is still sturdy and long-lived, will reduce the threat of accidents. On the other of the above, the multiplication of the fleet Train with the same route will facilitate the arrival and departure control systems without having wait too long. Stations are less suitable for use can be a significant problem. On the other hand the natural problems which may come suddenly, despite being predicted to also be a difficult problem to deal with, just be anticipated.

Government budgeting more, preferably for improved infrastructure for railway Trains can be one alternative to ease traffic congestion in major cities. With more attention to Train, will bring surplus to the government, if a lot of people who prefer to use the Train for mobility. Worse yet if it enters the atmosphere widths more passengers choose to use the Train should be further enhanced comfort [8].

The problems to be those reluctant or less interest in using rail services are supporting facilities in the Train. They think that if they get less amenities to create a comfortable during the trip. Providers should be more facilities to maintain good and make it comfortable. Cleanliness is one of the reasons of discomfort in the Train. Different classes, different treatment facilities are also clean, although his seharus permanent differences existing standards [6].

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