Journal of Public Representative and Society Provision
Vol. 6, Issue 2, 2026
Page 568-577
Doi: https://doi.org/10.55885/jprsp.v6i2.822

Analysis of the Jak Lingko Program as a Transportation in Jakarta

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Abstract. *This study aims to analyze the Jak Lingko program as a means of transportation in Jakarta. The research method used is qualitative. The subjects of this study were stakeholders of the Jak Lingko policy program in Jakarta. The research instruments used as supporting tools or technical instruments were interview guidelines, several photo files, audio files, related documents, and tools such as computers/laptops, digital cameras, mobile phones, flash drives, stationery, and vehicles as transportation for researchers in conducting research. Data collection techniques in this study were literature studies, field studies through observation, and interviews. The results of this study are as follows: The importance of transportation integration in Jakarta stems from the high level of traffic congestion that has never been resolved, along with the level of pollution produced by transportation facilities.*

Keywords: *Traffic Jam, Jak Lingko, Public Transportation, Analysis*

Received: November 27, 2025 Revised: January 23, 2026 Accepted: April 21, 2026

INTRODUCTION

Government policy is a series of interrelated decisions taken by a political actor or group regarding chosen goals and the means to achieve them in a situation where these decisions are, in principle, still within the limits of the authority of these actors. In the context of governance, the government plays a very important role in achieving the goals of justice, order, and social stability (Ullah et al., 2025; Rahmani & Koohshahi, 2013). The government must be able to guarantee social stability, including the provision of public transportation.

Transportation plays a very important role in encouraging mobility and regional development (Kale, 2024; Xueliang et al., 2013; Polyzos & Tsiotas, 2020; Makarova et al., 2023). The impact of transportation adoption is very noticeable, especially in the socio-economic dimension and so on (Yang et al., 2015; Tucho, 2022; Sierzchula et al., 2014). However, the presence of transportation also influences local phenomena such as air pollution which impacts environmental conditions and public health (Frank & Engelke, 2005; Katoshevski et al., 2011; von et al., 2019; Kelly & Fussell, 2015; Bickerstaff & Walker, 2001).

Thus, it can be said that transportation modes are the backbone of urban life, especially in urban areas (Zhou, H., & Gao, 2020; Mavlutova et al., 2023; Shen, 1997; Rode et al., 2017). Large cities are often centers of economic, social, cultural, and educational activities that can attract people from various regions to come and settle in the city (Lin et al., 2026). This certainly gives rise to a challenge in the form of high population mobility which will certainly give rise to a negative impact, such as the problem of traffic congestion caused by the increase in the population that is proportional to the increase in the number of vehicles.

ISSN 2776-1266 (print), 2776-1266 (online)

This will have a negative impact in the form of reduced time efficiency that can affect productivity levels, congestion will also contribute to increasing levels of pollution as an impact of exhaust gases produced by motor vehicles which of course can threaten public health in urban areas (Larson et al., 2025). This is also in line with the level of traffic congestion in Indonesia, particularly in several major cities, represented by Bandung, which ranks 12th as the most congested city in the world. This is followed by Medan at 15th, Palembang at 53rd, Surabaya at 70th, and Jakarta at 90th.

Furthermore, the problem of air pollution also haunts large cities as a consequence of the increasing population (this is also in line with the increase in vehicle volume). Air pollution is a condition where the air is contaminated with hazardous substances that can harm human health, animals, and the environment (Manisalidis et al., 2020; Kampa & Castanas, 2008; Patel et al., 2014; Ghorani-Azam et al., 2016; Almetwally et al., 2020). These substances can be in the form of solid particles, gases, and vapors originating from various sources including industry, motor vehicles, fossil fuel combustion, domestic waste, and forest fires (Odubo & Kosoe, 2024; Jakhar et al., 2023; Wilkins & Wilkins, 1985). Air pollution can affect the environment in the following ways: acid rain, global warming, ecosystem damage and decreased air quality (Afnan et al., 2025; Dutta & Singh, 2021; Wright & Schindler, 1995; Grennfelt et al., 2020).

The increasing number of vehicles in Indonesia from year to year can cause various problems such as traffic jams and air pollution. The number of motorized vehicles in Indonesia reached 148,261,817 million in 2022, an increase from the previous year's 141,992,573 million. The rapid increase in the number of vehicles exceeding the available road width has caused traffic congestion and high levels of pollution on several highways in Indonesia. Indonesia itself is ranked fourth as the country with the largest pollution in the world, below the superpowers of the United States, China, Russia, and Brazil (Al et al., 2025; Pasaribu et al., 2025). This is certainly not something for Indonesia to be proud of, and a solution is needed to reduce the production and spread of pollution in Indonesia (Wang et al., 2024).

Indonesia currently has 38 provinces consisting of 416 districts and 98 cities. All of these areas undoubtedly produce pollution. The number and volume of vehicles in Jakarta has been increasing annually, resulting in and further complicating Jakarta's traffic congestion. Congestion is not solely influenced by vehicle growth; several other variables contribute to this congestion (Bainus et al., 2025; Mondschein, A., & Taylor, 2017; Rahman et al., 2022; Sardari et al., 2018; Retallack & Ostendorf, 2018).

The next factor that can cause traffic jams in Jakarta is from human resources themselves, this can be analogized if the high level of vehicle volume in Jakarta is not accompanied by a high level of discipline in obeying all traffic regulations. Applicable traffic regulations. Behavior that does not comply with traffic regulations can impact congestion itself, for example, picking up or dropping off passengers inappropriately, violating road markings, stopping in random places, and even the habit of going against the flow of traffic can affect congestion in Jakarta (Bagirzade, 2024).

Based on the explanation above, the Jakarta Special Region Provincial Government has ways to overcome air pollution, including the WFH policy for ASN within the Jakarta Special Region Provincial Government, transportation strategies, use of public transportation, water spraying, company operational closures, long-term handling, institutional collaboration, motor vehicle restrictions, use of more environmentally friendly fuels, developing more efficient public transportation, and increasing public awareness of the importance of the environment.

Due to the large number of vehicles owned by residents in the Jakarta Special Region metropolitan area, the government is collaborating with several sectors, including the private sector, to reduce Jakarta's air pollution index. One of the Jakarta Special Region Provincial Government's programs is the Jakarta Jak Lingko Program. The Jak Lingko program is derived from the words "Jak," meaning "Jakarta," and "Lingko," meaning "Network" or "Integration." In other words, the Jak Lingko program is an integrated multimodal transportation payment system.

ISSN 2776-1266 (print), 2776-1266 (online)

With Jak Lingko, the planning, management, and payment of transportation trips are integrated. Furthermore, this program is also based on DKI Jakarta Governor Regulation (Pergub) Number 68 of 2021 concerning the Implementation of an Integrated and Integrated Transportation System.

Figure 1. JakLingko

Furthermore, the goal of Jak Lingko is to increase the use of mass public transportation in Jakarta and reduce the use of private motorized vehicles by integrating various public transportation options. Public transportation included in this program includes: large, medium, and small TransJakarta buses, as well as the MRT, LRT, and KRL CommuterLine. This system allows users to utilize various modes of transportation at a lower cost. Jak Lingko Jakarta is an effective solution to increase the use of public transportation in Jakarta and reduce congestion and pollution in Jakarta.

Furthermore, this will encourage people to use public transportation and reduce the use of private transportation to reduce gas emissions from private vehicles. Access to public transportation is also a vision of the Special Region of Jakarta, with public transportation usage estimated to reach 60% by 2030. Addressing the phenomenon of air pollution and congestion certainly requires collaboration between the government, industry, and the community to create a cleaner and healthier environment for Jakarta residents and preserve natural resources for future generations.

Jakarta's traffic congestion is becoming increasingly complex and difficult to manage due to the uncontrolled number of vehicles, which is twice the current population of Jakarta. According to data released by TomTom, a geolocation technology specialist, Jakarta's 13th Traffic Index ranks it as the 30th most congested city in the world. According to the index, Jakartans need an average of 23 minutes and 20 seconds to travel 10 km, and the average speed of vehicles in Jakarta during rush hour is only 21 km/h. Thus, Jakartans can waste as much as 117 hours due to the traffic jams that plague Jakarta.

Based on these conditions, the JakLingko program was formulated as an effort to resolve congestion problems and as an effort to reduce pollution levels in the Special Region of Jakarta. Furthermore, the content of the JakLingko policy itself supports these efforts by integrating existing transportation modes in Jakarta to make it easier and attract people to switch to public transportation. The JakLingko program is expected to contribute to or be able to reduce congestion and pollution levels in the Special Region of Jakarta.

Integrating various modes of transportation in large cities (especially Jakarta) can be a solution to improve air pollution levels and address existing congestion issues. The main principle of public transportation system integration is to move from one place to another through driver-friendly intermodal facilities, thereby helping people move more easily, reducing travel costs and discomfort. Public transportation integration can also help Jakarta residents become more accustomed to and encouraged to use public transportation more (Suryawan et al., 2024; Sitinjak et al., 2023; Warnars et al., 2017; Oktorini & Barus, 2022). This is based on the main principle of

ISSN 2776-1266 (print), 2776-1266 (online)

transportation integration, which is intended to make it easier for people to move or mobilize at a lower cost and with greater comfort (Mo et al., 2021).

The importance of transportation integration in Jakarta stems from a condition of traffic congestion problems that have never been resolved, along with the high level of pollution produced by transportation facilities, according to the DKI Jakarta Environmental Agency in 2020, it stated that the transportation sector contributed 67.04% of the total amount of pollution in Jakarta, this condition is largely influenced by motorized vehicles that use fossil fuels or oil which produce dangerous output or emissions in the form of CO/carbon monoxide, nitrogen oxide/NOx, and fine particles measuring PM2.5.

Thus, it is hoped that the Jak Lingko policy can solve the traffic congestion problem in Jakarta and can create better air conditions for the people of Jakarta by reducing pollution levels by using public transportation modes that have been integrated by the Provincial Government of the Special Region of Jakarta.

In this study, researchers will analyze the Jak Lingko program as a means of transportation in Jakarta. The results are expected to provide a reflection on the government's Jak Lingko program. This research aims to identify the impacts of the Jak Lingko policy as a means of transportation in Jakarta.

METHODS

The method used in this research is a qualitative method approach, according to Moleong, qualitative methods are used to understandphenomena about what is experienced by research subjects, for example behavior, perception, motivation, actions, etc. Furthermore, unlike quantitative methods, qualitative research is a type of research whose findings are not derived from statistical procedures or other forms of calculation. Researchers prefer qualitative methods because they allow for the most detailed and in-depth information possible without any limitations. Researchers also believe this method allows them to experience the problems or phenomena being studied in the field. The analysis in this study is that the DKI Jakarta Environmental Agency and the DKI Jakarta Transportation Agency are responsible for the Jak Lingko policy program in DKI Jakarta. The reason the researcher conducted the research at that location was because there were several informants and data related to the problem being studied. Informants were selected based on relevant parties or those directly related to the research problem, possessing data and being willing to provide it. The selection of informants was based on the criteria required by the researcher, with a focus on providing correct, accurate, and appropriate information. The researcher used an interview guide for this research instrument, several photo files, audio, related documents and tools such as computers/laptops.*camera digital*, mobile phones, flash disks, stationery and vehicles as a means of transportation for researchers in conducting research. The data collection techniques in this study were literature studies and field studies using observation and interviews. The data sources used were primary and secondary data sources. The data analysis techniques used included data collection, data reduction, data presentation, and conclusion drawing. The research was conducted at the Jakarta Special Region Environmental Agency and Transportation Agency.

RESULTS AND DISCUSSION

The Jakarta Special Region Government issued a policy on transportation integration in Jakarta through Governor Regulation (Pergub) No. 68 of 2021 concerning the Implementation of an Integrated and Integrated Transportation System, which explains the procedures for integrating public transportation in Jakarta. This policy was issued by the Jakarta Government to address existing transportation problems in Jakarta and as an effort to support the use of mass public transportation by the Jakarta public and limit private motor vehicle ownership.

The number of motorized vehicles in Jakarta itself tends to increase every year. This is in line with or caused by population growth in the Special Region of Jakarta, which increases every year. Currently (in 2024), the population of Jakarta is 10,677,975 million people. This large or

increasing population has an impact on the quantity of vehicles in Jakarta. Where the number of motorized vehicles in 2022 reached 21,856,081 million, dominated by motorcycles, passenger cars, trucks, and buses. This figure is in line with the population of Jakarta in 2022 which reached 10.63 million people, or the number of vehicles in Jakarta is twice the number of residents in 2022.

This situation naturally results in classic problems commonly found in various metropolitan cities in Indonesia, namely the level of congestion and pollution in the metropolitan area. This condition makes Jakarta the 90th most congested city in the world according to the traffic index issued by the transportation survey agency called TomTom. The large number of vehicles in Jakarta also impacts the ranking of the most polluted cities in Indonesia, where Jakarta is ranked as the sixth most polluting city in Indonesia.

The Jakarta Special Region Government certainly wants to make changes, by making efforts to create a healthy and comfortable city to live in. This comfort can be achieved by reducing the use of private vehicles, which can be achieved by changing people's habits from using private vehicles to routinely using public transportation. This effort was born through Jakarta Governor Regulation (Pergub) Number 68 of 2021 concerning the Implementation of an Integrated Transportation System through a program known as JakLingko.

The birth of the Jak Lingko policy or program is deemed necessary to support the mobility of people in Jakarta who tend to be busy, as stated by Nadia Putri as a Jakarta resident who is of the opinion that

> "*I think JakLingko is necessary because of the traffic congestion in Jakarta that makes it chaotic. Furthermore, the habit of violating traffic laws among Jakarta residents makes the situation even worse. JakLingko is also necessary because the pollution caused by traffic jams makes Jakarta's air very dirty. JakLingko's presence is there to ease congestion and reduce air pollution caused by private vehicles. I use public transportation every day, often using Transjakarta and sometimes using microtrans."*

The irregular traffic conditions in Jakarta which often result in congestion, then have an impact on the level of pollution in Jakarta. This is also supported by data that states the transportation sector as the main pollutant producer in Jakarta with a percentage reaching 67.04%, then the largest pollutant contributors in Jakarta are contributed by the industrial sector (26.8%), power plants (5.7%), housing (0.42%), and the commercial sector which contributes (0.02%) to Jakarta's pollution. The next opinion was also expressed by Ichsan Nurdiansyah as a Bandung resident who is currently working in West Jakarta who explained the importance of Jak Lingko as follows;

> *"I understand JakLingko as a feature or public facility provided by the Jakarta government, in the form of buses or microtransport services like public transportation (angkot). From my perspective, JakLingko exists because Jakarta, as the capital city, has a large population, numerous industrial areas, offices, and so on. Therefore, connectivity is needed to support the mobility of every citizen in Jakarta."*

Jak Lingko is a feature or program presented by the Jakarta Special Region Government to facilitate the activities or mobility of people in Jakarta and its surroundings. JakLingko is important in Jakarta, which is known as the central government and business center in Indonesia, which presents an attraction for people in the surrounding area to come and look for life or work in Jakarta.

The presence of JakLingko can be considered a solution to address these issues. This is in line with what Jakarta resident Mikha explained:

> *"As a worker, I think JakLingko is very helpful, especially in terms of costs and benefits. In terms of costs, I can cut or save Rp. 600,000 by using Transjakarta, I also feel that Transjakarta is more comfortable when compared to the experience of using private vehicles*

ISSN 2776-1266 (print), 2776-1266 (online)

(motorcycles or cars). Next, regarding pollution, because I think the air pollution in Jakarta is unbearable, if I use a motorbike to go to work, I definitely feel short of breath. Thus, I think JakLingko is quite helpful for workers in terms of costs, ease of payment, ease of integration with other modes of transportation (microtrans, LRT, MRT or KRL), and routes that already cover small areas. That's why I think JakLingko makes things easier for the community and helps with daily mobility. JakLingko is important because the government is the provider of infrastructure (transportation). Imagine if Jakarta had no public transportation? There would definitely be traffic jams that would disrupt various sectors, from government to business. JakLingko exists as proof of the government's presence in concrete form because it can cover all elements of society, from the lower classes to the upper classes. on".

The above opinion also explains that the problem of traffic jams and poor air quality in Jakarta is a major concern or concern for the importance of the existence of JakLingko in Jakarta which can facilitate mobility or daily activities of the community. Furthermore, he also added that the existence of JakLingko is a real proof of the presence of the government around the community. This is also supported by the opinion expressed by Kustining Rachmani as a Young Expert Policy Analyst in the Directorate of Transportation and Intermodal Integration Systems and Services of the Ministry of Transportation who stated that,

"*JakLingko exists because of the ongoing traffic congestion issue that has yet to be addressed in a more structured, comprehensive, and comprehensive manner to reduce congestion. This integrated transportation model seeks to alleviate congestion, reduce the number of private vehicles, and optimize the use of the public transportation we provide. Another issue is the high levels of pollution in major cities across Indonesia. We are currently working to shift public transportation toward cleaner modes of transportation, encouraging people to switch to more environmentally friendly public transportation. Most public buses in major cities in Indonesia already run on zero-emission electric vehicles. These issues are a consideration for the Ministry of Transportation to think about how these impacts can be reduced through push (issuing policies) and policies (which are assisted by each regional government to think about how to contribute directly to reducing these issues. Because in our opinion, the community has not yet received comfort in public transportation, in the sense that it is difficult to meet other public transportation within close proximity. This results in a tendency for the public to use online transportation, we (Directorate General of Traffic and Traffic) are here to create an integrated transportation service (physical and system), connected, and sustainable.*

The above descriptions also mention that JakLingko exists due to Jakarta's severe traffic congestion and air pollution levels. However, they also explain that this policy exists to alleviate congestion and even reduce the number of private vehicles. Furthermore, from an environmental perspective, the JakLingko policy aims to increase the use of clean transport, or vehicles that use environmentally friendly fuels.

A similar opinion (regarding the presence of JakLingko which stems from the problem of traffic jams and air pollution in Jakarta which has not been resolved) was also expressed by Tiana as Head of the Environmental Pollution Group of the DKI Jakarta Environmental Service who said,

"*JakLingko is present based on the Instruction of the Governor of DKI Jakarta Number 66 of 2019, where there are 7 (seven) actions to overcome and control the problem of air pollution. Some actions such as tree planting, transportation integration through the JakLingko program, implementation of emission tests in the DKI Jakarta area, and supervision of factories in Jakarta. In the Governor's Instruction, many parties collaborate to solve the problem of air pollution in Jakarta, such as the Transportation Agency, the Public Works Agency, the Forestry Agency, etc. This Governor's Instruction also starts from the problem of Jakarta as the most congested city and the city with the worst air pollution in the world, even reaching the rank of 1st most polluted city in the world in 2019. JakLingko was then realized through Governor Regulation Number 68 of 2021 concerning the Implementation of an Integrated and Integrated Transportation System.*

ISSN 2776-1266 (print), 2776-1266 (online)

This opinion shows that the existence of JakLingko stems from the InGub (Instruction of the Governor) of DKI Jakarta in 2019 as an effort to overcome and control air pollution in Jakarta, currently Jakarta is recorded as the 19th most polluted city in the world on August 21, 2025. This data can of course change every day, depending on the level of pollution in Jakarta every day. Jakarta's position today is better compared to other big cities in various parts of the world, even better than neighboring Malaysia, represented by Kuala Lumpur, which is ranked 7th in the world.

This condition, of course, cannot be achieved easily; a policy is needed that can resolve and become a solution to resolve existing problems. Through the Instruction of the Governor of DKI Jakarta Number 66 of 2021 concerning Air Quality Control, it explains the strengths or steps taken by the Government to resolve existing problems, for example by issuing instructions to the Jakarta Environmental Agency to conduct and tighten emission testing procedures for vehicles in Jakarta, instructing the Jakarta Transportation Agency to be able to implement the odd-even policy and increase parking fees in areas served by public transportation, etc. The JakLingko policy didn't just emerge out of nowhere; several factors triggered its creation. These factors include the persistent traffic congestion problem and the poor air quality in the Special Region of Jakarta.

Furthermore, the description above can provide an illustration that the JakLingko program policy as an integrated transportation model to solve the problem of congestion and reduce air pollution in Jakarta is not running well, because it does not pay attention to the forces in the policy-making process, both from an environmental perspective (increasing quantity of private vehicles, population growth, increasing community mobility, lack of socialization regarding emission tests, and the large number of office and industrial sectors in Jakarta) and those that are specific (reports in the mass media that mention Jakarta as the most congested and most polluted city in the world).

CONCLUSION

The JakLingko Program policy, a model for integrated transportation in Jakarta by 2024, has not been implemented effectively due to insufficient attention to various factors in the policy-making process, such as environmental aspects (population growth, private vehicle growth, congestion, air pollution, and increased public mobility) and specific aspects (congestion, which has made Jakarta one of the most congested cities in the world). This has resulted in unresolved congestion and air pollution issues in the Special Region of Jakarta.

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ISSN 2776-1266 (print), 2776-1266 (online)