

A Comparison Study of Public Transport Subsidy in Indonesia and Abroad: Policy Insights

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Abstract: Transportation plays an important role in connectivity, facilitating mobility, and increasing the social/economic progress of society, so transportation is an essential part of human life. However, not all levels of society get equal transport affordability, especially for socially disadvantaged groups (low income, no job, low skills, ill-health, poor housing). People disadvantaged by the absence of transport affordability will find it challenging to access essential goods and activities (work, health facilities, education, socialization), thus leading to transport poverty. This condition can happen when marginalized people live far from urban centres with poor public transport facilities due to lower purchasing power. These conditions force them to incur higher transportation costs to access urban centres. Policy implementation from stakeholders is needed to address the problem of transport poverty and increase transport affordability for disadvantaged communities. This research is a comparative study of public policies on public transportation subsidies in Indonesia. The research data comes from regulations and work programs related to public transportation subsidies in various cities in Indonesia (Jakarta, Surabaya, Palembang, etc.) and abroad (London, Paris, San Fransisco, etc.). The research used a descriptive-analysis approach to explore and describe various data sources. The preliminary result obtained in this study is the uneven distribution of policies and implementation of policies related to public transport subsidies in various cities in Indonesia. Moreover, mostly in developed countries, there are more programs related to public transportation subsidies, although no regulations govern these programs. The results of this study can be expected to be considered by stakeholders to design and implement policies that can equalize transport affordability for all levels of society.

Keywords: public transport; subsidy; transport poverty; policy

Introduction

The growing importance of public transportation in urban development agendas on a worldwide scale is increasing since there is a higher priority on inclusive urban policy. In many developed nations, local governments need help ensuring public transportation affordability for a large portion of the disadvantaged population. To tackle this issue, specific systems have introduced targeted subsidies that cater to distinct social demographics, including students, older people, and individuals with limited mobility.

The Indonesian local government should consider implementing a policy to provide a subsidy system for public transportation that explicitly targets individuals from low-income households. This initiative would reduce the financial strain experienced by these households. The implementation of transport subsidy policies should commence with a comprehensive analysis of the implications of such subsidies from an accessibility standpoint. This analysis should evaluate the impact of subsidies on equity and employment prospects. The pro-poor subsidies implemented in Indonesia are anticipated to present alternate scenarios to enhance coverage, accessibility, and equity.

In developing countries, individuals who are members of low-income groups face a restricted absolute threshold in terms of the number of trips they can undertake due to their limited and frequently unpredictable financial resources. Consequently, this limitation hinders their prospects of escaping poverty. Hence, current research and policy agendas must prioritize advancing a greater understanding of these travel behaviours and their consequential effects on access or opportunities. Policies are implemented to support low-income groups in accessing transportation, with a particular emphasis on optimizing public transport in various areas. The primary objective of this program is to tackle multiple sustainable development goals simultaneously.

This study aims to conduct a comparative analysis of public transportation subsidy schemes in Indonesia. The research data is derived from rules and work plans about public transportation subsidies in several cities within Indonesia. We also draw upon lessons learnt from other global contexts to enhance the breadth of viewpoints.

Literature review

Alternative method of subsidy allocation

Studies in many places produced the identification of the subsidy mechanism. Low-income commuters on public transport are getting assistance through various subsidies (Guzman & Hessel, 2022; Guzman & Oviedo, 2018; Rodríguez et al., 2016; Rodríguez & Peralta, 2016). The types of subsidy programmes are listed below, together with the lessons discovered from their application: (1) Subsidies reduce travel costs for formal sector employees, reducing income burden and passing on remaining expenses to employers, thereby reducing taxes on transportation costs (2) Free transportation is being implemented in poor neighbourhoods to improve transportation options, although the targeted approach may not be suitable for all beneficiaries, (3) Program, which provides a subsidy card to low-income households in suburban areas, directly transferring funds to limit multimodal travel fares and (4) Subsidies for various categories, such as elderly, students, and war veterans, aim to increase transport access for poor people but often fall into inclusion and exclusion fallacies. However, in the Indonesian context, the subsidy mechanism is provided to public transport operators to procure facilities, operational costs (Prayudyanto, 2021; Wahyuni, 2021), tariff subsidies (Hariani et al., 2020; Insan et al., 2020), and direct cash assistance (Serebrisky et al., 2009), targeting specific target groups such as fuel subsidies (Pohan & Al-Farizi, 2023).

Some subsidy program builds on several crucial elements. First, the gradual deployment of electronic fare media (smart cards) in public transportation systems offers a way to transfer the subsidy to target recipients (Guzman & Oviedo, 2018). These electronic price media can be customized to record user information and programmed with various offerings (Rodríguez et al., 2016). Second, leveraged the nation's expertise with other poverty-targeting programs, such as conditional cash transfer programs, which rely on the nation's poverty-targeting system and database; in Indonesia, NIK (single identity number for Indonesian citizen) was used; in Bogota, SISBÉN was used (Guzman & Oviedo, 2018).

Subsidy impact on low-income households

The subsidy impact which can be captured and give some lessons learned in several regions are as follows: (1) In Bogota, pro-poor public transport subsidies can reduce the accessibility gaps between better-off and lower-income populations (Guzman & Oviedo, 2018; Rodríguez et al., 2016; Rodríguez & Peralta, 2016) (2) From Latin America and the Caribbean (LAC) in the context of the public transport dimension, affordability should be addressed through demand side subsidies as they are known for minimizing errors of inclusion and avoiding supply-side distortions (Gandelman et al., 2019; Yañez-Pagans et al., 2019) (3) The investigation that is currently available in developing countries suggests that present public urban transport subsidy schemes do not benefit the poorest. (Serebrisky et al., 2009). In this study, we have not found empirical facts that can be used to conclude the impact of subsidies on people with low income in Indonesia.

In urban areas that have well-established infrastructures, there has been a development of advanced interventions that seek to enhance operational efficiency and increase accessibility for marginalized individuals. These efforts encompass the implementation of policies such as integrated tariffs or transport subsidies, which aim to optimize demand and enhance affordability for socioeconomically disadvantaged populations (Yañez-Pagans et al., 2019). The findings of this study validate the notion that transportation subsidies serve as one of the mechanism choices for augmenting the accessibility of transportation (Gandelman et al., 2019). Moreover, The demand-side mechanism can be configured to allow for heterogeneity by incorporating user-specific factors into the individual demand function. This mechanism also establishes an appropriate framework for modelling price discrimination and non-uniform pricing (Horcher & Tirachini, 2021). The demand side is particularly relevant in the context of developing countries due to the prevalence of urban public transport subsidies for social purposes. These subsidies serve as a means to enhance mobility and the well-being of the most economically disadvantaged individuals (Serebrisky et al., 2009).

Data & Methods

The data in this research in the form of policy documents regarding transportation subsidies were obtained using institutional survey and web search survey methods. An institutional survey was carried out to obtain policy documents in the local government of the Yogyakarta Special Region (DIY) directly from the relevant institutional offices, both provincial and district/city levels. Meanwhile, policy documents from various countries were obtained using the web search survey method. "Web search survey" is a type of research or survey that uses search engines or web searches as a tool to collect data or information from the internet. This method involves using search engines to search for and collect data from online sources such as websites, articles, forums, or other information sources.

From the policy documents that have been collected, an examination is then carried out on the actions and implementation directed by the policy. The results of observing actions and implementation are then carried out comparative analysis using the comparative policy analysis (CPA) method (Traore, 2023). CPA is an approach in public policy science that compares the policies of various entities (such as countries, regions, or organizations) to understand the differences, similarities, and impacts of these policies. The main goal of comparative policy analysis is to gain insight into how policies differ based on context, objectives, and implementation. This research step can be seen in Figure 1.

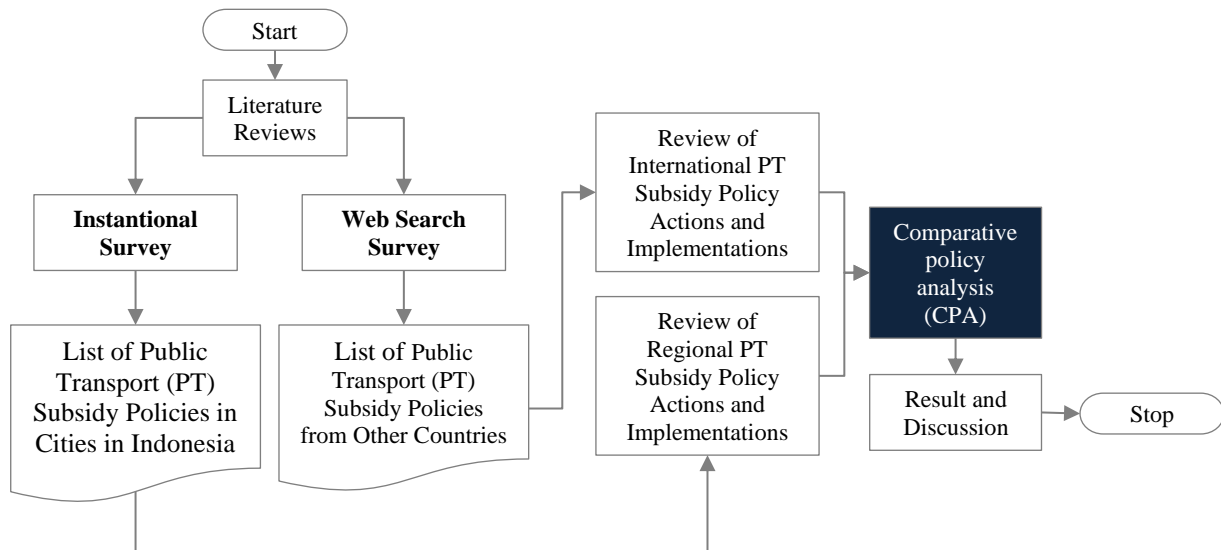


Figure 1. Research Methodology

Result and Discussion

Public transportation serves as a fundamental infrastructure component within urban transportation systems in major cities worldwide, particularly in densely populated metropolitan regions (Horcher & Tirachini, 2021). As mentioned above, public transportation in urban development agendas on a worldwide scale is increasing since there is a higher priority on inclusive urban policy. This study investigates the existing regulation about transport subsidy programs in Indonesia and several countries. The results are depicted in Table 1 and Table 2.

Table 1. Regulations/policies/programs related to public transport subsidy in Indonesia

No.	Policies	Summary	Implementation
1	Governor Regulation (PERGUB) of Yogyakarta Special Region Province Number 127 of 2021	It involves implementing the Trans Jogja subsidized city transportation system with the buy-the-service system. Includes general provisions, the person-in-charge of implementing the Trans Jogja subsidized urban transportation system, the assignment of Trans Jogja subsidized urban transportation, subsidy calculations, route networks, service tariffs, supervision and community participation.	Trans Jogja
2	Governor Regulation of Special Capital Region (DKI) Jakarta Number 63 of 2020	Contains subsidies for Transjakarta public transportation services, integrated highway modes, and integrated highways. Covers about 1. general provisions, 2. assignment and provision of subsidies 3. monitoring, evaluation, and reporting 4. Coaching and supervision 5. Transitional Terms	Jaklingko
3	Bandung Regent Regulation No. 96 of 2020	Contains public passenger transportation subsidies, including general provisions, public passenger transportation subsidies, guidance and supervision	
4	Palembang Mayor Regulation Number 4 of 2021	It contains procedures for providing subsidies for public passenger transportation bus rapid transit sourced from the Palembang city regional budget and expenditure.	
5	Peraturan Walikota Kediri No. 7 Tahun 2016	Contains public passenger transportation subsidies, including general provisions, public passenger transportation subsidies, guidance and supervision	

Table 2. Regulations/policies/programs related to public transport subsidies in several countries

No.	Programs/Regulations	City/Country	Act	Summary
1	<i>Sistema Nacional de Selección de Beneficiarios</i> (SISBEN)	Bogota (Colombia)	-	The proxy-means tested SISBEN index categorizes prospective social programme beneficiaries based on socio-economic parameters such as household demographics, marriage status, level of education, job status, income, assets, and home features. One of the SISBEN programs is public transport subsidy, which uses smartcard to have lower fares per trip.
2	Berlin sozialticket (Berlin-S-pass)	Berlin (Germany)	-	Berlin ticket covers all public transit in Berlin, including the S-Bahn, underground, buses, trams and ferries. The tariff zone and ticket validity determine the rate.
3	Public Transport Voucher (PTV)	Singapore	Bus Services Industry Act 2015	Public Transport Voucher (PTV) is a social welfare program designed to assist low-income commuters in coping with increased public transportation fares. Each PTV costs \$30 and can be used to top off fare cards or purchase annual concession passes. People who earn less than \$ 1,600 are eligible for this program.
4	Ventra Benefit Program	Chicago (United States)	Transportation Equity Act for the 21st Century (TEA-21)	The Ventra Benefit is a transport program which the employers manage. It lets workers save up to \$270 a month on CTA, Pace, and Metra, lowering their taxes and making their commute more manageable.
5	Concession Card	Sydney (Australia)	-	A concession card is a program that subsidizes the cost of public transportation in and around Sydney for eligible individuals. People eligible for this program are pensioners, elders, veterans and low-income people.
	Qingdao Bus Subsidy	Qingdao (China)	-	

Regulation/programs of public transportation subsidies in Yogyakarta

Regulations related to public transportation subsidies in Yogyakarta are explicitly contained in the Governor Regulation (PERGUB) of Yogyakarta Special Region Province Number 127 of 2021, implemented in Trans Jogja subsidized transportation system with a buy-the-service scheme. *Buy the service* scheme is a mechanism for the government to purchase mass transportation services from operators through an auction based on Minimum Service Standards or Quality Licensing that meets aspects of comfort, security, safety, affordability, equality, and health (RakaMandi & Winaya, 2022). The latest Trans Jogja fare is currently around 3 thousand rupiahs in one trip (long and short trip) with the highest fare of Rp. 3.600,- (regular) and the lowest fare Rp. 2.700,- (subscription) (Sani & Wahid, 2023).

It is recorded that from 2021 to 2023, there is no increase in Trans Jogja fares. The stable fares on Trans Jogja can be confirmed in previous research on the Trans Jogja bus service (Damayanti & Khoirudin, 2021). However, the research findings in 2021 stated that affordable fares did not significantly affect the public interest in using Trans Jogja buses. (Damayanti & Khoirudin, 2021).

Regulation/programs of public transportation subsidies in Jakarta

The Jaklingko program is being used in the Special Capital Region (DKI) Jakarta region to implement the Governor of DKI Jakarta's Regulation Number 63 of 2020. Jaklingko is an integrated transportation service from PT Jaklingko Indonesia that manages several public transit options, including KRL, MRT, LRT, and TransJakarta. (Forino & Putranto, 2023). This program was launched by the Governor of DKI Jakarta, the Minister of Transportation, and the Minister of SOEs (State Owned Enterprises) on July 15, 2020 (Forino & Putranto, 2023). The following table contains detailed fares from Jaklingko (Forino & Putranto, 2023).

Urban (MRT, Trans Jakarta & LRT)		Suburban (KCI & Railink)	
Distance (km)	Fares	Distance (km)	Fares
0-2	Rp 2.500,-	0-3	Rp 2.000,-
2-17	Tariff increase of Rp 500,- per km	3-67	Tariff increase of Rp 125 per km
highest fares	Rp 10.000,-	highest fares	Rp 10.000,-

However, Jaklingko has a maximum time limit of 45 minutes for intermodal transfers and a maximum travel time of 180 minutes, meaning that if passengers exceed the allotted time limit, it will be classified as a new trip. (Forino & Putranto, 2023). In addition to the above modes, Jaklingko has an angkot mode with a 0 rupiah tariff that is still operational as of this writing. According to the most recent research, Jaklingko has a relatively high level of satisfaction with services (Wijianto et al., 2022), has a positive sentiment in society (Ladayya et al., 2022), and has an impact on reducing the congestion index in the DKI Jakarta area (Al-Adha & Atmojo, 2023).

Regulation/programs of public transportation subsidies in Bogota

The local government in Bogota 2014 implemented a pro-poor public transport subsidy based on SISBEN (*Sistema Nacional de Selección de beneficiarios*), a national social policy targeting mechanism that provides discounted access to the Integrated Public Transport System for low-income households (Guzman & Oviedo, 2018). Based on prior research in 2018, the pro-poor subsidies implemented in Bogotá, together with the potential alternative scenarios for expanding its coverage, exhibit a progressive nature that enhances accessibility and promotes equity among those who are eligible for the subsidy (Guzman & Oviedo, 2018).

Regulation/programs of public transportation subsidies in Qingdao

The average annual growth rate of vehicle kilometre cost operated by Qingdao public transport firms from 2015 to 2017 shows a considerable decrease compared to 2013-2014, resulting in a noticeable saving effect (Zhao-Hui et al., 2020). The fiscal subsidy scheme for public transport in Qingdao was more rational than the cost-control measures implemented under the previous system (Zhao-Hui et al., 2020). Preferential policies like bus transfers and half-price tickets for the elderly benefit public transport travel and change habits but may increase financial subsidies to some extent (Zhao-Hui et al., 2020).

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