The Need for Comprehensive and Modern Public Transportation in Indonesia

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Abstract

Public transport accessibility and connectivity in Indonesia, as in other fast-growing cities, are critical. Congestion due to the domination of private vehicles reduces productivity. Some cities have introduced solutions such as Transit-Oriented Development (TOD). National problems of implementing Transit-Oriented Development (TOD) are very complex and often involve various aspects, such as spatial planning, transportation, and environmental and social interests. TOD policy in Indonesia has not been fully integrated between the central and regional governments. This can cause differences in standards and approaches to the practice of TOD in various regions. The increasing growth of vehicles, which is not balanced with the development of public transportation infrastructure in some areas, is one of the factors in the less-than-optimal development of TOD. This paper discusses the need for comprehensive and modern public transportation in Indonesia. The application-based, Buy-The-Service (BTS) scheme is an innovation in efficient operations.

Keywords
Sustainability, Comprehensive, Modern.

1. Introduction
Public transportation is a means of transporting passengers that uses a rental or payment system. Another definition of public transportation (mass transportation) is a transportation system that aims to move many passengers to different destinations. In this case, public transportation plays an important role in supporting the economy of metropolitan cities (Dewa Dwi Putra et al., 2023). Public transport accessibility and connectivity in Indonesia are critical. Congestion due to the domination of private vehicles reduces productivity. Some cities have introduced solutions such as Transit-Oriented Development (TOD). National problems of implementing Transit-Oriented Development (TOD) are very complex and often involve various aspects, such as spatial planning, transportation, and environmental and social interests. TOD policy in Indonesia has not been fully integrated between the central and regional governments. Many areas are not covered by effective modes of public transportation, thus hampering the TOD concept, which should encourage public mobility

1.1 Objectives
The article aims to find out and analyze the development of comprehensive and modern public transportation. The government needs to develop an integrated multi-modal transportation policy. The application-based Buy-The-Service (BTS) scheme is an innovation implemented in the 2020-2024 RPJMN to create professional and efficient mass transportation (Presidential Regulation No. 18 of 2020 on the National Medium-Term Development Plan 2020–2024., 2020). Cashless payments are starting to be implemented, but full integration with digital platforms requires additional study and regulation. Collaboration between regulators, operators, and society is important in creating sustainable transportation that is responsive and inclusive. Until now, the use of information system applications in the provision of modern public transportation services has only been limited to several metropolitan cities and large cities in Indonesia and there is no certainty as to when it will become a unified system, considering that so far many

transportation organizers (operators) have taken turns because there is no certainty of income from the services provided. Therefore, there is a need for a study with a comprehensive approach to public transport, taking into account appropriate indicators (Dolya et al., 2017).

2. Literature Review

The transportation system is a very important means of supporting the successful development of a country, especially in supporting community economic activities and regional development (Tamrin Lanori & Bambang Heri Supriyanto, 2023). Almost all Regency/City Governments in Indonesia generally pay serious attention to transportation. Apart from establishing institutions, they also allocate large budgets to sectors that increasingly require serious treatment (Prasetya & Winarna, 2014). The government promises to provide sustainable transportation in the long term, to improve transportation management, and future planning emphasizes road pricing and the involvement of modern transportation (Sunitiyoso, 2010). The influence of motorization and urbanization, which is then followed by suburbanization in many metropolitan areas, has been of interest to transportation and urban researchers over the last few decades (Susilo et al., 2007).

Traffic jams can influence dissatisfaction with public transportation. In an area with a large population and high economic activity, this will be the cause of traffic jams. In addition, if an area is in a traffic center or close to public facilities, it can cause traffic jams (Ji & Gao, 2010). The government has done several things to overcome the congestion that has occurred. One of them is developing a new road network. However, this solution will not solve the problem, because it will only add to a new problem, namely the increase in the number of private vehicles, besides many new routes. Another solution that is considered more effective in solving the problem of congestion is to utilize the function of public transportation. However, in recent years, there has been a decline in public interest in public transportation due to erratic schedules, routes that do not reach all areas, impractical payment systems, and other reasons related to safety, comfort, and poor infrastructure (Rasyid et al., 2018). Urban transportation development remains an important issue for public authorities to ensure service quality. It requires the authorities responsible for transport policies and regulations to be responsible for their implementation (Ngah et al., 2020). Therefore, local governments are developing the effectiveness of travel between public transportation modes in an integrated manner. Effective intermodal connectivity will be optimized through public transportation with a modern system (Wijianto et al., 2022).

These concepts emphasize the importance of investigating the impact of gated communities (GC) on urban transport systems from the perspective of maximizing public transport service coverage. The city of Bogor, which is a developing residential area, was used as a case study, and spatial analysis was carried out using the GIS (Geographic Information System) method to evaluate the impact of GC on the performance of the public transportation network and its implications for future city development (Nugroho et al., 2024). The Trans Pakuan Bus Rapid Transit mode of infrastructure that has been provided by the Bogor City Government since 2007 has the aim of realizing integrated and systemized transportation to reduce congestion problems and divert the use of public transportation which is increasingly disorderly when operating. However, the public's low interest in mass transportation and public transportation is currently decreasing, causing the demand and supply ratio to be unbalanced. The quality of public transportation modes in Bogor City is decreasing and supporting infrastructure is also decreasing (Wahyuni & Rachmawati, 2019).

Based on laws related to transportation, it cannot be denied that transportation is the most important part of an area, especially in urban areas. If transportation is problematic in an urban area, it will result in problems for other activities. The main role of an efficient transportation system is to enable people to easily access various facilities and services needed in everyday life (Matoka et al., 2022). Transportation provides better accessibility to education, health, commerce, and entertainment so that people can take advantage of the resources and opportunities available in various locations. Apart from that, transportation also contributes to reducing traffic congestion by optimizing road use and introducing smart transportation solutions, such as mass transportation and sophisticated traffic management systems (Nafi'ah, 2021). The transportation problems that occur are the result of unsustainable transportation system planning. The growth rate of transportation infrastructure cannot keep up with the high growth rate of transportation needs due to the high level of urbanization, the rapid growth rate of the number and ownership of vehicles, and the inefficient urban public transportation system. The issue of environmental pollution and limited fossil energy resources needs to be addressed in planning a sustainable transportation system (Ridhani et al., 2021). A sustainable transportation system is a transportation system that can accommodate maximum possible accessibility with minimal negative impacts

(Aminah, 2020). Sustainable transportation in the economic aspect seeks transportation system services that can support economic activities (movement of people, goods, and services) at low costs. Accessibility planning also ensures that each destination remains easy to reach with all types of available transportation modes, for example, non-motorized vehicles, public transportation, and transit (Brotodewo, 2010). Sustainable transportation in the social aspect seeks equality and social justice in society vertically and horizontally in accessing transportation services and the existence of institutions that support a sustainable transportation system, through policies/regulations and community participation in planning. Apart from that, in this social aspect, the security and safety of motorized vehicle users and other road users, including pedestrians, also receive special attention (Tamin, 2007).

3. Methods

This study employs a qualitative research approach that aims to explore and analyze the current condition of public transportation development in Indonesia by providing a detailed and comprehensive description of existing problems within their natural context. This method is particularly suitable for examining regulations, policies, and institutional frameworks, as it allows researchers to interpret social phenomena based on contextual understanding and meaning.

Qualitative research is method-oriented and uses an interpretative and naturalistic approach, meaning that it investigates issues within their real-world setting. It attempts to make sense of phenomena in terms of the meanings people bring to them. This aligns with the research objective of analyzing comprehensive and modern public transportation policies in Indonesia. Several studies referenced in this research have applied different methods to assess public transportation. For example, (Ji & Gao, 2010) used modeling approaches to analyze satisfaction with public transportation, treating satisfaction as the dependent variable and accessibility indices and personal attributes as the independent variables. Other studies, such as (Nugroho et al., 2024), utilized Geographic Information System (GIS) techniques to evaluate the impact of gated communities (GC) on public transportation networks and their implications for future city development. These methodologies highlight the range of tools available to understand the challenges in public transport development.

4. Data Collection

The data in this study were obtained using the desk study method, specifically through an extensive literature review. Secondary data were collected from reliable sources such as:
a. National and international peer-reviewed journals; Official government regulations and policy documents (e.g., Law No. 22 of 2009, Presidential Regulation No. 18 of 2020);
b. Reports from the Directorate General of Land Transportation and related agencies;
c. Case studies on BTS program implementation and TOD development in Indonesian cities;
d. Relevant research on sustainable transportation systems, accessibility, and institutional performance.

The collected data were analyzed using content analysis techniques to identify themes, patterns, and gaps between policy objectives and actual implementation. The findings are presented in descriptive narratives structured to highlight critical issues and opportunities in developing a comprehensive and modern public transportation system in Indonesia.

5. Results and Discussion

5.1 The Importance of Accessibility and Connectivity

Rapid population growth can also encourage increased use of private vehicles. So the number of private vehicles exceeds road capacity, causing congestion which disrupts city productivity. One solution to reduce the city's dependence on private cars is to encourage the use of public transportation. In addition, regional development based on TOD principles can encourage the use of public transportation. Where the TOD concept can be interpreted as a pedestrian-friendly environment, located around transportation facilities, and the overall TOD concept aims to provide a healthy and sustainable lifestyle (Asfarinal et al., 2023).

TOD-based area development aims to minimize vehicle movement by ensuring that residents living in TOD areas can work or carry out other activities in the area on foot. Meanwhile, if they want to do activities outside the area, they can access public transportation easily and comfortably because the development is designed to make connectivity to and from transportation nodes easier, whether by walking, cycling, or using the public transportation system (Xu et al., 2017).

Transportation is an important link to support growth and also for the smooth running of urban areas. To improve the transportation network and reduce several problems, the government needs to create an integrated Multi-Modal Urban Transportation Policy system and its supporters. As is known, the optimization of transit development is influenced by multimodal connectivity, which can help users access their destinations easily and accessibility as an element that supports the movement of goods and services. This accessibility must be connected or interconnected with walking facilities or the provision of public transportation modes.

5.2 Approach to Sustainable Public Transport Service Patterns (Sustainable Public Transport)

The implementation of urban mass public transport will involve 3 (three) actors, namely public transport users, organizing operators, and regulators. Each actor has a role and demand in organizing public transportation. If viewed from a passenger perspective, public transport users expect that the transport services provided will have cheap rates, fast travel times, and safe and comfortable vehicle conditions. Meanwhile, from the perspective of transport providers or organizers, they will be oriented towards a profitable public transport business (Litman & Litman, 2017).

Reliable public transport services are supported by quite large operational costs because they are related to the number of fleets and crew deployed. These operational costs will be borne by users in the form of service fees. However, public transport users expect the fares charged to be affordable. To reconcile the requests from the 2 (two) parties, the government as a regulator can create a policy that can accommodate the requests from the 2 (two) parties organizing urban mass public transportation (Naveen & Gurtoo, 2020).

Public transportation in a developing country is characterized by the existence of an institution (central government) that is responsible, which will result in conflicts of authority in the region. In multimodal transportation planning and funding, the responsibilities of relevant agencies are often fragmented, with efforts to rationalize transportation planning and management at the government level. Regarding tariff control, tariff exemptions, and social obligations, developing countries generally use a fixed tariff system with some government regulations regarding standard tariffs. Furthermore, considerations of transportation justice in developing countries have not been a priority in transportation planning compared to economic considerations (Adinata et al., 2021). Lack of comprehensive planning is one of the main factors that creates connectivity gaps causing public transport services to become inefficient and ineffective. Coordination between agencies is still lacking in planning. This causes inefficiency in planning sustainable public transport service patterns (Sustainable Public Transport) due to a lack of involvement of the authorities (Rahman & Abdullah, 2016).

5.3 Modern Management Approach for Providing Public Transport Services

Urban transport strategies have been formulated with long-term policy objectives or visions in mind. In addition to strategic policies to achieve long-term goals, a series of feasible projects and actions must be proposed for implementation, accompanied by operational and management requirements (Rahman et al., 2018). The phenomenon of public transportation is related to the logic of modernization and capitalism. The current public transportation problem in Indonesia's big cities cannot be solved with technology alone. Changes in people's behavioral patterns with the introduction of mass transportation, e.g., buses and trains, can be interpreted as a significant change in municipal transport options. For transportation service users, the existence of public transportation means that the population's movement patterns and travel behavior have changed (Rezaimoghadam et al., 2022). For the government, organizing public transportation means that the government implements policies in providing transportation, ranging from technical, sociological, to political, such as land acquisition, regional planning, capital, and so on. This continues in the government's interaction with the forces of capital. To build a sustainable public transport system, all aspects of public transport must be revitalized. Local governments play an important role in planning and implementing public transport policies (Greer & van Campen, 2011).

Effective transportation means that the transportation system meets the transport capacity in a unified or integrated manner with other modes of transportation in an orderly, regular, smooth, fast, precise, safe, comfortable, and economical manner. Meanwhile, it is efficient in the sense that the burden on the public as users of transportation services is low and has high utility (Ariesandi et al., 2020). This is following the aim of organizing road transportation, namely to implement road traffic and transportation safely, smoothly, orderly, comfortably, and efficiently; able to

integrate other modes of transportation; reaching all corners of the mainland, supporting equality, and supporting national development at a cost that is affordable for the community (Hartyanti Putri et al., 2013).

Management of modern public transport service delivery, namely with urban mass public transport development programs, one of which is national priority program activities as stated in the National Medium Term Development Plan (RPJMN) 2020-2024. The bus assistance program from the center to the regions, which is the target of the 2020-2024 RPJMN which has been running previously, is considered by many groups to be less successful. Therefore, the Directorate General of Land Transportation has made an innovative breakthrough, namely the Road-Based Mass Public Transport Development Program in urban areas with the Buy The Service scheme.

This application-based Buy The Service concept is supported by good management in carrying out monitoring and evaluation which includes operational systems, maintenance systems, financial management systems, and HR systems which are supported by digital technology in real time to move towards more professional public transportation.

Improvements to public transportation services must be carried out by improving urban mass public transportation (Prayudyanto et al., 2019). The buy-the-service scheme has been designed for 5 cities with a budget of IDR 250 billion (in 2020) which will be used for purchasing services through technical assistance in 5 pilot cities, development of an Intelligence Transport System or ITS (fleet management), and management. The amount of budget allocated per region depends on the results of the Planning Document study.

5.4 Public Transport Services Financial Approach

The larger the budget allocated per region, the more comprehensive the revitalization implementation in that city can be. The assistance is expected to be provided for 4 years (multi- years) to provide sustainability for the transportation system being built and business certainty for the operator. The buy-the-service scheme is designed to prioritize existing operators. However, the operator must be able to adapt to the minimum service standards (SPM) that have been set and fulfill the auction requirements (Prayudyanto, 2021).

One of the Ministry of Transportation's pilot projects through the Directorate General of Land Transportation in providing public transportation services is known as Buy The Service. The facilities provided in this service are non-cash payments as a whole and innovation in providing the Bus Friends application (Widyaputra Yulianyahya, 2023).

Policymakers and planners should try to encourage active travel, while public transport operators should focus on creating ways to use public transport safely. Currently, public transportation cannot fulfill its role as a public service, thus encouraging policymakers to promote active mobility and prioritize public transportation to reduce unequal transportation access.

The existing transportation payment system is cash and electronic card payments. Research confirms that electronic cards that can be used include subscription cards and cards that collaborate with banks, including BNI TapCash, BCA Flazz, and MANDIRI E-money (Khasanah et al., 2022). As for the integration of urban transport payments with existing electronic wallet payment systems in Indonesia, such as Gopay, OVO, Shopeepay, Dana, etc., a prior study is needed to consider its effectiveness during implementation. Not only that, it is also necessary to create a separate law as the basis for implementing the policy.

Based on the results of the analysis, it can be concluded that because the funding for these two transportation services is different, a special study is needed regarding the integration of appropriate fare collection between the two parties. BTS buses funded by the Ministry of Transportation have been designed for a non-cash payment system using electronic cards and barcode scanning via the Teman Bus application. Meanwhile, to fulfill passengers' wishes regarding the provision of a payment system that is integrated with various types of electronic wallets in Indonesia, a special study is needed. Another consideration is the efficiency of providing the payment system. The basis for regional governments to carry out obligations related to public transportation is contained in several regulations as follows in Table 1.

Table 1. Regulation of Public Transport that Supports the Financial Approach

Article 138 (Law No.22/2009)	Indicator
1) Public transportation is organized to meet the need for safe, secure, comfortable, and affordable transportation. 2) The government is responsible for the implementation of public transportation as intended in paragraph (1). 3) Public transportation of people and/or goods is only carried out by public motorized vehicles.	(1) The government is **obliged to guarantee the availability** of public transportation for intercity, interprovincial, and cross-border transportation of people and/or goods. (2) **The Provincial Government** is obliged to ensure the availability of public transportation for the intercity transport of people and/or goods within the province. (3) **The District/City Regional Government** is obliged to guarantee the availability of public transportation for the transportation of people and/or goods within the district/city area. (4) The provision of public transportation services is carried out by State-Owned Enterprises, **Regionally-Owned Enterprises**, and/or other legal entities under the provisions of laws and regulations.

The table above shows that after the division of authority and affairs becomes clear, regional governments can allocate budgets effectively, efficiently, and appropriately in the APBD documents.

5.5 Approach to Policy Aspects of Implementing Public Transport Services
From the perspective of state administration theory, a policy is needed that always addresses and answers public needs. To form a holistic and comprehensive public policy, a discussion is needed about the policies that must be taken by involving every interested party in public transportation policy. A dialogue process is needed so that the policies formed cover every interest and need of stakeholders (Wijaya et al., 2018).

This success is determined, in part, by the suitability of the public's desires for the public transport system plans that will be developed by the government. Based on research results, options for optimizing the public transport system have not received public attention for a long time. In general, people are already thinking about using a new, more attractive system, one of which is the offer of a BRT usage scenario with sufficient feeders (Parasian Silitonga & Riani, 2017).

Several studies have attempted to improve the performance of public transport to increase the number of public transport passengers which has decreased significantly, but it must be acknowledged that the rate of decline in public transport passengers in several areas of the archipelago is difficult to halt. Improvements in the performance of existing public transport have not significantly increased the popularity of public transport. The concept of increasing the use of private transportation, and efforts to reduce the utility of private vehicles have a more dominant influence. Of course, this makes it very difficult for the government to implement it because it involves social issues, where people's lifestyles currently still prioritize the use of private vehicles as a reason for personal interest which is thought to be closely related to social status in society (H et al., 2021).

Normatively, the public has the right to control the course of service delivery through the mandate given to the government, but the question is to what extent the public is involved in the real decision-making process. This kind of public transportation management pattern means that the public is locked into being limited to service users and does not have space to voice their transportation needs (Sukarto, 2019). There is no single policy (single solution) that can immediately completely solve urban transportation problems. The policy that must be taken must be a combination of several policies or strategies that can synergistically solve existing transportation problems (Sahara et al., 2021).

The success of policy implementation will be determined by many variables or factors, and each of these variables is interconnected with one another. For this reason, a policy model is needed to simplify the understanding of the concept of policy implementation (Handayani et al., 2021). The government makes regulations regarding

transportation that refer to Law Number 22 of 2009 concerning Road Transport Traffic (LLAJ). Policies are made to overcome a problem and meet public needs.

Every policy has a goal set by the policymaker, namely the government. Article 213 in Law Number 22 of 2009 explains that the government develops and builds environmentally friendly road traffic and transportation infrastructure and facilities. In Article 3 Letter b of Law Number 22 of 2009 concerning Road Transport Traffic, it is stated that road transport traffic is carried out to realize traffic and road transport services that are safe, secure, orderly, smooth, and integrated with other modes of transport to encourage the national economy, advance general welfare, strengthen national unity and integrity, and be able to uphold the dignity of the nation. The policy approach will lead to the commitment of local governments in organizing public transport (Figure 1).
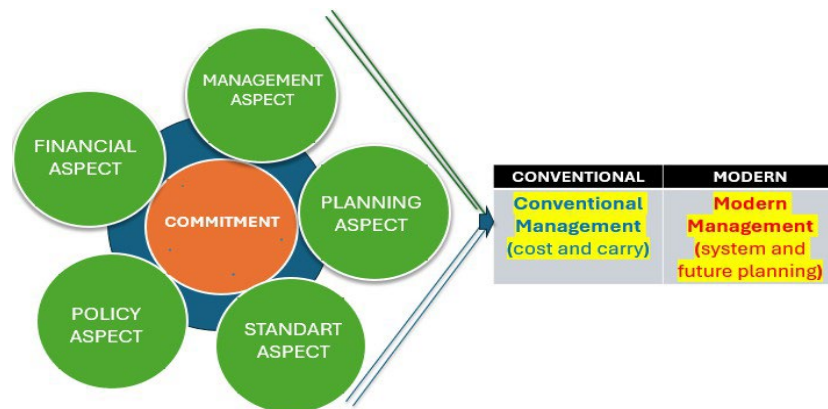

Figure 1. Commitment to the Implementation of Public Transport

5.6 Comprehensive Public Transport Service Standardization

Integration means integration to become a unified whole. Developing the integration of public transportation in urban areas can be done by providing service integration facilities that can guarantee the realization of high effectiveness and efficiency in its implementation. In implementing the public transport system, several parties are involved, namely users, entrepreneurs (operators), and the government (regulator). Each party has its interests, and the policies taken can accommodate all parties by their functions, rights, and obligations contained in a regulation or law (enforcement) (Siswoyo, 2008).

The operator (entrepreneur) is the party that concentrates on the operation of the public transport system and carries out daily decisions relating to specific conditions of service characteristics, such as scheduling, determining operating ceilings, and fleet maintenance. Users are the parties who make travel decisions in a public transportation system, which is influenced by the amount of costs they have to pay to travel (fees) and other costs (intangibles) that cannot be measured in monetary terms, such as waiting time, distance, and length of trip. Regulators (government) are parties that control interactions between operators and users. This regulator reviews system performance in terms of operational techniques and financial economics and provides specifications for the provision and operation of the public transportation system. This regulator's policy is the benchmark for the level of public transportation supply services provided. The importance of the three factors involved in interactions in the public transportation system has different perspectives (Sinaga et al., 2020).

The preparation of this Regional Regulation is aimed at: (a) realizing transportation that can improve and maintain the quality of the environment; (b) realizing transportation that is reliable, highly capable, and carried out in an integrated, orderly, safe, smooth, comfortable and efficient manner under the Region's position as the capital of the Unitary State of the Republic of Indonesia; (c) realizing transportation that can support, mobilize and encourage activity centers to increase regional productivity and competitiveness with cities in the world; (d) provide transportation infrastructure and facilities at primary and secondary activity centers and/or between activity centers for the smooth running of state and/or government, development and community administrators; and (e) developing transportation that is integrated

with regional, national and international systems (Imam et al., 2014).

The standards applied to public transport have several very important interests, including Passenger Safety: Strict standards regarding safety ensure that public transport users can travel safely. This includes vehicle fitness, driver SOPs, safety equipment, and rules that must be followed by operators and users.

Traffic Safety: Clear and strict standards help reduce the risk of traffic accidents by ensuring that vehicles operate according to established standards. This includes the use of designated lanes, regular vehicle maintenance, and driver training. Passenger Comfort: Standards covering comfort ensure that public transport users can travel comfortably. Facilities that include clean and comfortable bus stops, good ventilation in vehicles, and adequate lighting are examples of this. Accessibility for All: Accessibility standards ensure that public transportation is accessible to everyone, including people with disabilities. This includes facilities for wheelchairs, easy access for people with mobility impairments, and clear and easily accessible information. Affordability: Affordable fare standards ensure that public transport is accessible to all levels of society. This helps reduce social and economic disparities by enabling affordable access to transportation for everyone. Environmental Quality: Standards that focus on energy efficiency and emissions reduction can help reduce the environmental impact of public transportation. This includes the use of environmentally friendly vehicles and policies that support the use of sustainable transportation. Improved Mobility: By ensuring that public transport operates efficiently and effectively, the standards help improve people's mobility. This allows individuals to access work, education, health services, and recreation more easily. Thus, the standards applied to public transport have a very significant impact in ensuring that these services can provide maximum benefits for society, as well as contribute to sustainable and inclusive city development (Ode & Mote, 2023).

The facilities provided are to support service activities carried out for service users with disabilities, the elderly, pregnant women, and children so that they get maximum service on public transportation services ((Prasetyo & Andry, 2019). The main priority currently is cheap public transportation so that it is affordable for all levels of society. However, this is often the reason used to reduce service quality. Public services must be prioritized because they concern the lives of many people. Cheapness often comes at the expense of safety, reliability, and comfort, which are the three most important things in proper transportation at low costs so that it can be affordable by the whole community (Riansyah et al., 2018).

Under the expectations and roles of each actor in organizing urban mass public transport, the policy of providing reliable and sustainable public transport can be classified into 3 policy groups, namely service policy, financing policy, and collaboration. Service policies relate to minimum service standards for public transport services that can meet the expectations of prospective passengers. Meanwhile, financing policies are implemented to support operators so they can provide optimal services for the community. To synergize these 2 policy groups, there needs to be cooperation carried out by the parties involved in the implementation of urban mass public transportation services. This policy can be followed up through revenue schemes from farebox revenue and non-farebox revenue such as land value capture and other creative financing (Pramesti et al., 2023).

Public transportation is supposed to be managed by the government with better services. Supervision during vehicle fitness tests should be tightened by implementing strict sanctions for public transport companies that violate regulations. Tariff collection requires using a smart or electronic card, thereby minimizing the possibility of corruption or leakage of funds. Users who do not have a smart card can pay in the box provided at a low rate. The public transport operating system must pay attention to peak and non-peak hours so that during peak hours, it can be operated with low intermediate times and during non-peak hours with higher intermediate times, so the operational costs can be reduced. Funding for public transportation should come from the government, so government subsidies are needed. Public transport operators should become government employees so they can focus on serving passengers and not chasing deposits (Widayanti, 2022).

A policy can be seen as a result or effect when the policy is implemented. This is because the effects are not immediately visible in a short time. The effect is time-limited. One type of influence is individual influence. Several indicators can be used as basic guidelines to determine whether the impact on individuals can be biological/physical, psychological, economic, or social/personal (Damayanti et al., 2023).

6. Conclusion

The importance of accessibility and connectivity in public transport systems cannot be ignored, especially in the context of cities with rapid population growth. In conditions where the use of private vehicles dominates, congestion becomes a major problem that reduces city productivity. To overcome this, the recommended solution is to encourage more efficient and integrated use of public transportation, one of which is through the implementation of Transit-Oriented Development (TOD). TOD creates a pedestrian-friendly environment close to means of transportation, allowing residents to access public transportation more easily and reduce dependence on private vehicles. In this concept, vehicle movement can be minimized, because residents can work or carry out daily activities in an area designed to integrate various modes of transportation, such as walking, bicycles, and public transportation.

To create effective transportation, the government needs to develop an integrated multi- modal transportation policy, where users can easily move from one mode of transportation to another. In developing countries, one of the main obstacles is the fragmentation of responsibilities between agencies authorized to plan and finance transportation, which often causes inefficiencies in public transportation services.

In a modern management approach to public transport services, the Indonesian government has begun to take innovative steps with the application-based Buy The Service (BTS) scheme, which is also accompanied by real-time management of operations, maintenance, finance, and human resources supported by digital technology. This program is part of the 2020-2024 RPJMN, to build a more professional and efficient mass transportation system. In the BTS scheme, existing operators are still prioritized, but they must adapt to the minimum service standards set.

A financial approach is an important aspect in supporting the sustainability of public transportation services. Non-cash payment systems, such as electronic cards and digital applications, have begun to be implemented, but to achieve full integration with various electronic wallet platforms in Indonesia, further studies and additional regulations are still needed.

Finally, the importance of policies that create collaboration between regulators, operators, and the community cannot be separated from efforts to develop sustainable transportation services. Through dialogue and involvement of various parties in decision-making, the policies formed will be more responsive to public needs and able to create an inclusive and efficient transportation system. Successful policy implementation will depend on the involvement of all parties and compliance with comprehensive service standards, covering technical, financial, and regulatory aspects. Public transportation must be better managed, with a focus on safety, comfort, accessibility, and efficiency, all of which are regulated in regulations and minimum service standards.

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