

CHAPTER I

INTRODUCTION

1.1 Background

This study aims to see the extent of public satisfaction with the Transit-Oriented Development facility in Dukuh Atas. It is undeniable that transportation is one of the basic human needs. Transportation is a supporting component in the life sector, whether in the government or social systems. The socio-demographic conditions influence the performance of transportation in the area (Kamaruzzaman1, 2012).

In addition, the level of population density also significantly influences the ability of transportation to meet the community's needs. In urban areas, the trend is an increase in the number of high populations due to the birth rate or the influence of urbanization. The level of urbanization has implications for the increasingly dense population, which directly or indirectly reduces the competitiveness of the transportation of an area. The complexity of public Transit can be seen in several major cities in Indonesia, one of which is DKI Jakarta.

The transportation system is an essential infrastructure element that affects urban development patterns and community service forms (Kamaruzzaman1, 2012). The development of transportation and land use has an essential role in the policy and development of government programs. Community involvement in revamping or restructuring the transportation sector is an urgent matter. Therefore,

the demand for updating public transportation is very critical for big cities such as DKI Jakarta.

DKI Jakarta Province is directed at the Jabodetabek metropolitan area (Jakarta, Bogor, Depok, Tangerang, and Bekasi) as the business district's center and government's center (RTRW DKI Jakarta Tahun 2010-2030). The average population growth of DKI Jakarta reaches 0.94% per year (Provinsi DKI Jakarta Dalam Angka 2019), causing the need for transportation to support economic activity, which can be seen through the number of people's movements or the number of Jabodetabek commuters in 2018 which reached 3,566,178 people (Statistik Transportasi DKI Jakarta 2018).

DKI Jakarta, as the center of the economy, certainly has a variety of public transportation to support workers in downtown Jakarta. The Jakarta MRT, Transjakarta, and Commuter Line are the most popular public transportation. The three modes of transportation are mainstays not only for Jakarta residents but for residents around Jakarta, such as Bogor, Depok, Tangerang, and Bekasi. Throughout 2021, 7,175,595 people were using the Jakarta MRT service. This number shows that the average per day is around 19,659 people using the Jakarta MRT, with 75,553 train trips. The last two months at the end of 2021, from November to December, showed an increase of up to about 14 percent (JakartaMRT, 2021).

As for Transjakarta, as of December 1, 2021, Transjakarta has transported 505,434 people per day, with 237 thousand people using BRT (Bus Rapid Transit), 195 thousand people using micro trans, and non-BRT as many as 65 thousand people (Prayoga, 2021). Throughout 2021 KAI Commuter noted that it had served 123,125,911 Jabodetabek KRL users, with an average of 337,331 users per day. This number decreased by 19.6% compared to the number of Jabodetabek KRL users throughout 2020, which was 153,154,151 users with an average daily user per day of 419,600 (KRL.co.id, 2021).

Transport planning is critical in serving the community's needs to carry out activities, especially in urban areas with high mobility. To improve the quality of public transportation, therefore a unified land-use transport system is needed through the concept of Transit Oriented Development (TOD). The TOD concept is a solution to transportation problems to improve services, especially the connectivity between one transportation and another. Transit-Oriented Development (TOD) is a transportation development concept that can easily reach the center of the station transit area. It is carried out by integrating transportation policies, land use, and environmental factors to be sustainable.

Human behavior is a benchmark for mapping the needs and activities of the community in the provision of pedestrian facilities. This supports the creation of the TOD Area by integrating areas oriented towards transit stations and mixed land use connected to pedestrian paths to create a public desire to use public

transportation instead of private vehicles and facilitate connectivity to travel destinations. The increase in mixed land use around transit points is also a step to reduce pollution and congestion in downtown Jakarta. To create a healthy and active lifestyle, increase the number of passengers or ridership, increase the added value of the property, improve accessibility for low-income people and decrease transportation costs.

To successfully implement TOD, it is necessary to interact between T (Transit) and D (development). These two things will develop an unwanted "Transit Adjacent Development" (TAD) without interaction. The difference between TOD and TAD is that TOD is a compact area that is associated with diverse activities based on public transportation. At the same time, TAD is a flooded area that is physically close to a transit station (within a radius of 500 meters). Still, it fails to take advantage of its proximity because it only develops "development" and is not based on "transit-oriented."

The Dukuh Atas area is located in the center of Jakarta, which is very strategic because it is surrounded by office buildings, shopping centers, green open spaces, and also residential areas so that with the construction of tod Dukuh Atas can accommodate jabodetabek residents in order to create a culture of the community to use public transportation instead of private vehicles so as to reduce transportation problems in DKI Jakarta. The complexity of transportation development in this area is certainly influenced by the form of public services for

the community as users. With the various facilities offered and have been applied by the DKI Jakarta Provincial government in the TOD Area, the author wants to monitor the level of public satisfaction with the existing transportation system. Especially in the connectivity of MRT, Commuter Line, and Transjakarta services. In addition to TOD Dukuh Atas, the DKI Jakarta Provincial Government also provides TOD facilities in several other areas, such as TOD Blok M, TOD Bundaran HI, and TOD Tebet, TOD facilities are provided by the DKI Jakarta provincial government to support the ease of using public transportation for residents of DKI Jakarta and its surroundings.

The Dukuh Atas area is located in the center of Jakarta, which is very strategic because it is surrounded by office buildings, shopping centers, green open spaces, and also residential areas so that with the construction of tod Dukuh Atas can accommodate jabodetabek residents in order to create a culture of the community to use public transportation instead of private vehicles so as to reduce transportation problems in DKI Jakarta. The complexity of transportation development in this area is certainly influenced by the form of public services for the community as users. With the various facilities offered and have been applied by the DKI Jakarta Provincial government in the TOD Area, the author wants to monitor the level of public satisfaction with the existing transportation system. Especially in the connectivity of MRT, Commuter Line, and Transjakarta services.

1.2 Problem Formulation

Based on the background described, the researcher saw the provision of the Dukuh Atas TOD facility, which serves various types of transportation such as the Jakarta MRT, Transjakarta, and Jabodetabek Commuter Line, especially the large amount of use of the three transportation. Therefore, this study will analyze how the Evaluation of the application of TOD to the connectivity of the Jakarta MRT, Transjakarta, and Jabodetabek Commuter Line at TOD Dukuh Atas?

1.3 Research Purpose

Based on the formulation of the Problem, the purpose of this study will evaluate the implementation TOD on the connectivity of the Jakarta MRT, Transjakarta, and Jabodetabek Commuter Line at TOD Dukuh Atas.

1.4 Research Benefit

1.4.1 Theoretical Benefit

1. Research is expected to increase knowledge and development of government science, especially those related to public services in urban areas, especially in TOD Dukuh Atas.
2. Evaluating the application of TOD to transportation connectivity in TOD Dukuh Atas.

1.4.2 Practical Benefit

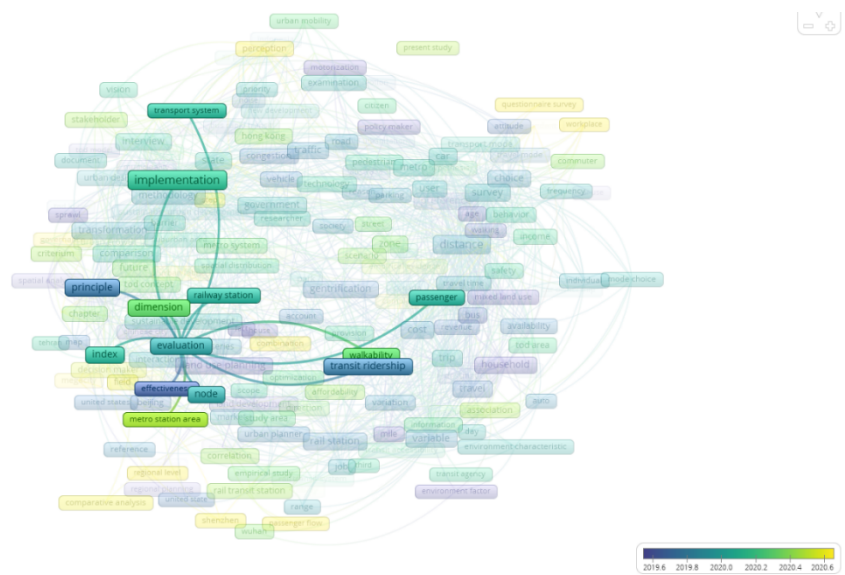
1. The research is expected to contribute directly to the development of TOD in Upper Hamlet

3. The research is expected to add additional material for knowledge on transportation connectivity, especially based on Transit Oriented Development (TOD)
4. Become a reference for transportation connectivity in Transit-oriented development areas

1.5 Literature Review

This sub-section describes several parts related to research, namely Evaluation and Transit-oriented development. The literature review described in this study is closely related to the background of the problems described in this study. Some literature reviews are:

Figure 1. 1 Visualization of Previous Research Networks Regarding Evaluation



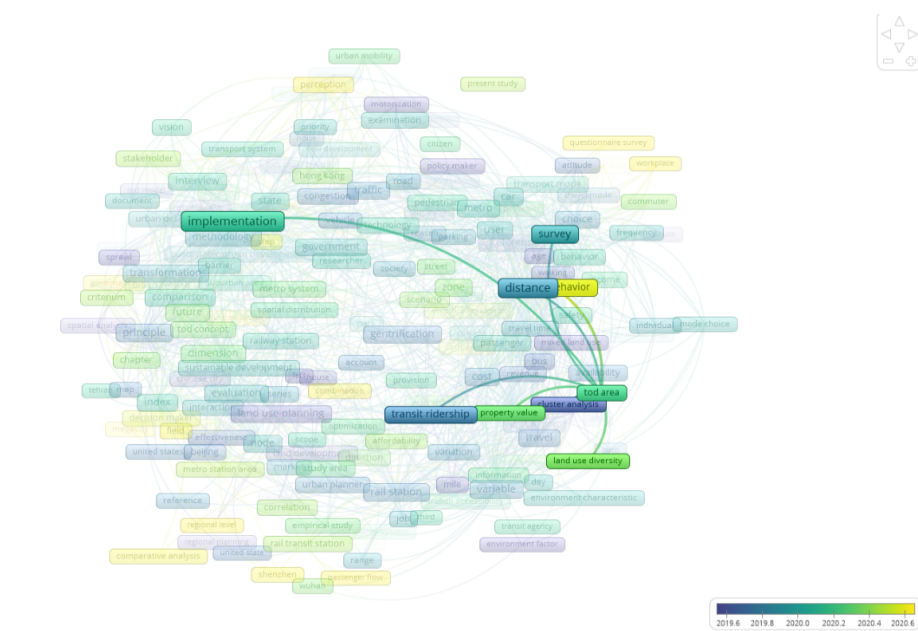
Source: Processed with Vosviewer

Table 1. 1 Classification of studies in Google Scholar

Cluster 1	1) Railway Station
	2) Passenger
	3) Index
	4) Node
Cluster 2	1) Effectiveness
	2) Transit Ridership
Cluster 3	1) Metro Station Area

The figure above is a mapping of previous research networks related to Evaluation. There are three colors that indicate a difference in years in the existing study. The color purple has one word related, which is related to "effectiveness," which is in 2019. The second color is blue, which includes "principle" and "transit ridership" in 2019. Then in the third green, there are several connected words such as "implementation," "railway station", "dimension", "walkability", "index", "metro station area", "node," and "passenger" in 2020. In this network, "evaluation" relates to all the networks mentioned above. Thus, research related to Evaluation is an interesting thing to discuss, especially those related to the Evaluation of the use of Transit-oriented development.

Figure 1. 2 Visualization of Previous Research Networks Regarding TOD



Source: Processed with Vosviewer

Table 1. 2 Classification of studies in Google Scholar

Cluster 1	1) Distance
	2) Survey
	3) Transit Ridership
Cluster 2	1) Land use diversity
	2) Prosperity Value
Cluster 3	1) Implementation

The figure above is a mapping of previous research networks related to Transit-oriented development. There are four colors that indicate the year of publication of the related research. The first color is purple which discusses related to "cluster analysis" in 2019. Then the blue color in which there are discussions related to "survey", "transit ridership", and "distance" in late 2019. The third color

is green which is related to "implementation", "property value", and "land use diversity" in 2020. The last color is yellow, which indicates and discusses "behavior" in 2020. The research is a study related to Transit-oriented development. This previous research was conducted to find out the studies that have been done before so that the research conducted by this researcher can be accepted originally and avoid the perception of plagiarism. Here are some previous studies:

Tanjung (2018) explained in his research entitled Monitoring and Evaluation of the Utilization of Special Funds for the Special Region of Yogyakarta in 2013-2017, that Evaluation is important because it can correct a program or policy that has been implemented so that it can then be implemented properly, in addition to that Evaluation is also a stick to know the improvement of the quality of a policy. Situmorang (2016) In his book entitled Public Policy (Theory, Analysis, Implementation and Evaluation of Policies) the author said that Evaluation could be a benchmark for policies to be taken in the future and also Evaluation is one of the final stages in determining the direction of future policies such as whether the policies taken have a positive or negative impact on society.

Rossi, (2019) said in his book entitled Evaluation: A Systematic Approach that Evaluation is needed to see how a program can be continued or not by looking at the performance of the program and looking at the negative sides that are a reference so that the evaluated program can run effectively. Safaee et al., (2016),

in their research entitled *A Focus on the Contribution of Promoting TOD to Increasing Tehran's Public Spaces* to reveal that Subway has significant potential and can contribute to public dynamics and vitality, quality of life, creation of public transportation facilities and convenient accessibility, air quality and public health, can be better thus, the development of rail-based underground transportation is very important for people's mobility The development of public transportation plays a role as potential in meeting the needs of society. In addition, it can also contribute to solving certain urban problems such as congestion and lack of adequate space, urban development, health promotion, and quality promotion of public space.

Other studies also conducted by van Lierop et al., (2017) the study cited the fact that TOD in North America focuses on urban design features, whereas in the Netherlands, it is on improving the overall quality of life by improving the urban environment. North America focuses on improving active transportation networks, while the Netherlands focuses on developing multimodal hubs and short travel times between railway communities. Another key difference is the connectivity between regions. The conclusion of building TOD is to provide flexibility, accessibility, and easy collaboration for the community.

In another study written by Petrucci (2018) entitled *Transit-oriented development, an update about the EU and the US approach*, the author found that TOD development in Europe focuses more on development in areas with high

population development, while for US areas, the author finds TOD development focuses more on developing sub-urban connectivity with urban areas. From the research, it was also found that the principles of TOD development are in line with the UN targets for sustainable development.

In line with research by Fawwaz (2018), with the provision of TOD facilities in Dukuh Atas, the author also hopes that the integration system at TOD Dukuh Atas can become a transportation node that connects DKI Jakarta with the surrounding cities. The author also said that in improving TOD services, it must be considered the speed, accuracy, and supporting facilities between modes of transportation to improve connectivity between transportations so as to make it easier for people to change modes of transportation.

The previous author stated is in line with the research conducted by Guo et al., (2018) In his research entitled Efficiency Assessment of Transit-Oriented Development by Data Envelopment Analysis: Case Study on the Den-en Toshi Line in Japan, the author said that accessibility to TOD is one of the factors in determining the efficiency of tod running explained that difficult access would have an impact on the lack of interest of users to use TOD facilities. next, the author also argues that the distribution or reach of TOD is also one of the important factors for the development of TOD because the wide distribution will have an impact on increasing the number of users, besides that the good TOD facilities mentioned must also be able to cover all circles. With the sake of efficient

transportation management is one of the important indicators in the development of TOD.

In addition, in the journal written by Aristyanto & Setiawan (2020) entitled Transit Gate Taman Tebet, the author emphasizes that in arranging TOD, the government must pay attention to locations such as residential areas, business centers, and shopping centers, . not only that, but the author also said that the transportation management in TOD must be considered, such as connectivity between transportation modes is easily accessible to the community, with this, the author hopes that the community can take advantage of TOD facilities easily.

In other studies revealed by Cazorla (2021) entitled A holistic decision-making process to improve the productivity of public transportation in Cuenca-Ecuador, it is also explained that accessibility, affordability, availability, and public acceptance of TOD are factors that must be considered in the development of TOD. Because development that does not affect these factors will affect the interest, effectiveness, management, and development of TOD. Then in the study, it was also explained that the construction of TOD must pay attention to existing transportation infrastructure because in addition to reducing development costs, the integration of existing transportation with TOD will improve connectivity, accessibility, and reach of TOD.

Research written by Ibraeva et al., (2020) entitled Transit-oriented development: A review of research achievements and challenges reveals that TOD

is the most effective solution in sustainable transportation programs and is widely adopted by many countries in the world. This success is influenced by proper and efficient problem planning, development, and management. However, it was also explained that, in its development, many TOD managements were not prepared for the new domestic problems that arose. These problems are usually influenced by social conditions, the state of the region or area, and the management and response to problems of the services provided. Therefore, for proper and effective TOD management, it must be responsive to domestic problems that arise.

Suraharta (2020), in his research entitled *The study of public transportation connectivity on roads in the Bekasi regency area* said that public transportation connectivity is where people can easily access intermodal transportation. In addition, in transport connectivity, the author thinks that the public transport network must pay attention to sharing aspects such as integrated schedules between transportation modes and tariffs that can be integrated between one transportation and another.

Owais et al., (2021) In their research entitled *Integrating underground line design with existing public transportation systems to increase transit network connectivity: Case study in Greater Cairo*, the author said that in improving public transportation connectivity, it must consider several factors, namely a strategic location that can accommodate intermodal transportation and can benefit the community as users of transportation services.

Moreover, Psaltoglou & Calle, (2018), in their research entitled Enhanced connectivity index – A new measure for identifying critical points in urban public transportation networks, researchers found that in measuring the level of public transport connectivity, it must be based on several indicators such as public transportation usage figures and looking at the density time of public transportation. this can be a reference for the government to build intermodal connectivity in the TOD Area so that the pace of connectivity of public transportation users can be accommodated properly.

Therefore, it is related to public services according to Hardiyansyah, (2011) In his research entitled Quality of Public Services - Concepts, Dimensions, Indicators, and Implementation, the author revealed that the government must conduct and analyze data, involve the community, consider all aspects that exist in society, analyze the accuracy of services, and must be realistic in providing public services, it is harmonized when the rules have been set that the services provided can be used optimally by the community. In line with the research conducted by Dila, (2019) in her research entitled Quality of Public Services, the author said that in improving government services, efforts must be made to facilitate, accelerate, and have certainty in service. so that through services it is hoped that negative complaints from the community can be avoided. Then in the research presented by Chen et al., (2021) entitled Transit-oriented development: Exploring citizen perceptions in a Booming City, Can Tho City, Vietnam, revealed

that the role of the relevant government in the formulation of clear and focused policies with the TOD program is one of the important factors to consider for TOD users. Furthermore, economic, social, and clear environmental impact analysis are also attractive factors for users to use TOD services.

The implementation of policies discussed by Sætren & Hupe (2017) in their research entitled *Policy implementation in an age of governance* described changes in policy implementation from the initial stage to the 2000 era; the author describes several important factors, one of which is indicators in determining the implementation of policies. These were policy characteristics, resources, implementation structures, attitudes, perceptions, actions of implementing personnel and target group characteristics. and the author concludes that policy implementation has made great strides towards implementing the more rigorous research methodologies prescribed by the third-generation research paradigm, but not enough, and not in a manner that has resulted in a more economic theory of policy implementation.

In addition, based on research conducted by Chasanah et al. (2017) entitled *implementation of village fund policies*, it is stated that implementation is a stage of realization of program objectives. In this case, what needs to be considered is the preparation of implementation, which is to think and carefully consider the various possibilities of success and failure, including obstacles or opportunities that exist and the ability of the organization assigned the task of implementing the

program. The author finds several indicators in implementing policy: access, bias, the accuracy of services, accountability, and suitability of programs and needs.

1.6 Theoretical Framework

1.6.1 Evaluation

Tanjung (2018) explained, that Evaluation is important because it can correct a program or policy that has been implemented so that it can then be implemented properly. Besides, evaluation is also important to know the improvement of the quality of a policy. Therefore, Situmorang (2016) Evaluation can be a benchmark for policies to be taken in the future, and Evaluation is also one of the final stages in determining the direction of future policies, such as whether the policies taken have a positive or negative impact on the community. The purpose of the Evaluation is to provide an understanding of and objectives of a program/policy, by looking at several aspects, such as its implementation and the impact provided. There are three elements, according to Situmorang (2016), what the evaluator must do in the implementation of the Evaluation is :

- a) Describes the output of a policy that is the result of that policy.
- b) Evaluation is related to the ability of a policy to correct social problems.
- c) Evaluation deals with any policy consequences in the form of reactions to government actions.

Meanwhile, in looking at the impact of policies, there are five dimensions that become benchmarks, namely: the impact on public problems

and on the people associated with them, the impact on the situation of other groups outside the target of a policy, the impact on the current and future circumstances, and the costs that are indirectly borne by the community. In the evaluation process, policy evaluation has problems because this process involves many interests, so failures when determining criteria can hinder this process. According to Anderson, the issues of policy evaluation consist of the following:

- a) There is uncertainty about policy objectives. This uncertainty or vagueness comes from the policy-setting process.
- b) Causality
- c) The spread of the impact of the policy, where the impact is part of the circumstances of the group outside the main target group.
- d) It is difficult to obtain data, especially statistics and relevant information, in the implementation of Evaluation.
- e) Resistance of officials, in which the evaluator must think objectively in obtaining knowledge.
- f) Evaluation can reduce the impact, so it does not receive much attention or, in other words, is ignored

On the other hand, eight factors cause the policy not to get the expected impact. The eight facts, according to Anderson, include:

- a) Insufficient resources.

- b) Methods of policy implementation.
- c) Public problems result from various factors, while the policies being implemented focus only on one Problem.
- d) The way people respond and familiarize themselves with public policy.
- e) Policy objectives conflict with each other.
- f) Large Cost
- g) The impossibility of solving many public problems.
- h) It concerns the nature of the Problem to be solved by the policy action.

1.6.2 Transit-Oriented Development (TOD)

Safae et al., (2016) revealed that Subway has significant potential and can contribute to the dynamics and vitality of the public, quality of life, creation of public transportation facilities and convenient accessibility, air quality, and public health, can be better thus, the development of rail-based underground transportation is very important for people's mobility The development of public transportation plays a role as a potential in meeting the needs of the community. In addition, it can also contribute to solving certain urban problems such as congestion and lack of adequate space, urban development, health promotion, and quality promotion of public space.

Van Lierop et al. (2017) say the fact that TOD focuses on urban design features, whereas in the Netherlands, it focuses on improving the overall quality of life by improving the urban environment. North America is very focused on

improving active transportation networks, while the Netherlands, they focus on developing multimodal hubs and short travel times between railway communities. Another key difference is the connectivity between regions. The conclusion of building TOD is to provide flexibility, accessibility, and easy collaboration for the community.

In other studies written by Petrucci (2018), argued that the development of TOD in Europe focuses more on development in areas with high population development, while for us regions, the author finds TOD development of TOD is more focused on developing sub-urban connectivity with urban areas. From the research, it was also found that the principles of TOD development are in line with the UN targets for sustainable development. In the success of this TOD, there are several indicators according to (Jihan, 2021), namely density, diversity, and design. The indicators are:

Table 1. 3 Indicators of TOD

Indicators	Variable	Parameters
<i>Density</i>	Basic Building Coefficient	At least 70% (specifically for cultural heritage buildings, must pay attention to the group)

	Building Floor Coefficient	Minimum 3.0 (for cultural heritage buildings only, pay attention to the class)	
	Building Density	450-1500 inhabitants/hectare	
Diversity	Land Use	30% of the area	
	Residential	70% of the area	
	Land Use		
	NonResidential		
Design	Availability of Pedestrian Lanes	100% Pedestrian lane availability	
	Pedestrian Lane Conditions	Lighting and bollard facilities, shading facilities, and tactile are available	
	Dimensions of Pedestrian Paths	Minimum 2 meters	
	Pedestrian Lane Connectivity	Waktu tempuh 5-10 menit dari titik transit	
	Pedestrian Crossing Availability	Barrier-free, at least 2 meters wide	

Building Condition	The building has features, good physical condition, and varied facades
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Source: Jihan (2021)

1.6.2.1 TOD Management

Accessibility, affordability, availability, and public acceptance of TOD are factors that must be considered in the development of TOD. Because development that does not affect these factors will affect the interest, effectiveness, management, and development of TOD. Then in the study, it was also explained that the construction of TOD must pay attention to existing transportation infrastructure because in addition to reducing development costs, the integration of existing transportation with TOD will increase connectivity, accessibility, and coverage of TOD Cazorla (2021).

Ibraeva et al., (2020) TOD is the most effective solution in sustainable transportation programs and is widely adopted by many countries in the world. This success is influenced by proper and efficient problem planning, development, and management. However, it was also explained that, in its development, many TOD managements were not prepared for the new domestic problems that arose. These problems are usually influenced by social conditions, the state of the region or area, and the management and response to problems of the services provided. Therefore, proper and effective TOD management must be responsive to domestic problems that arise.

There are 8 indicators described by the Institute for Transport and Development Policy (ITDP), including (ITDP, 2017) :

1. Walk, see the pedestrian realm whether it is fully available or not and safe and comfortable for pedestrians
2. Cycle, there is a complete and safe network of bike lanes with the availability of sufficient and safe bicycle parking
3. Connect, interconnected and varied walking and cycling routes
4. Transit, transit locations can be reached on foot only
5. Mix, diverse and complementary land uses
6. Densify, residential land use density
7. Compact, stations/stops located in urban areas
8. Shift, minimize the land traversed by vehicles

1.6.3 Transportation Connectivity

In improving public transportation connectivity, it must consider several factors, namely a strategic location that can accommodate intermodal transportation and can benefit the community as users of transportation services (Owais et al., 2021). In addition, in measuring the level of public transport connectivity, it must be based on several indicators, such as public transportation usage figures and looking at the density of public transportation. This can be a reference for the government and build intermodal connectivity in the TOD Area so that the pace of connectivity of public transportation users can be

accommodated properly (Psaltoglou and Calle, 2018). There are several criteria to determine the quality and measure the criteria of good transportation connectivity, while some of them are (Sulistyaningrum, 2018):

1. Capacity utilization of Transit. A transit system must have adequate capacity, because, with insufficient capacity, transit facilities will not be attractive to users. The indicators seen from this criterion are the number of passengers at busy times and the number of passengers when empty
2. The transit system is user-friendly, transit nodes should be user-friendly and visually, and ease of movement from one transportation to another must be available in transit facilities to be user-friendly. with indicators to be aware of, such as the safety of commuters at transit stop dan basic amenities information display.
3. Access and accessibility, transit nodes should be accessible for passengers and provide good accessibility to a range of destinations. The indicators seen from this criterion are Frequency of transit service, facility of transit mode access to job opportunities within walkable distance of the transit node

1.6.4 Policy Implementation

Sætren & Hupe (2017) explains the changes in policy implementation from the early stages to the 2000 era; the author describes several important factors, one of which is indicators in determining the implementation of policies. These were policy characteristics, resources, implementation structures, attitudes, perceptions,

actions of implementing personnel, and target group characteristics. and the author concludes that policy implementation has made great strides towards implementing the more rigorous research methodologies prescribed by the third-generation research paradigm, but not enough, and not in a manner that has resulted in a more economic theory of policy implementation.

In addition, Chasanah et al. (2017) said that Implementation is a stage of realization of program objectives. In this case, the preparation of Implementation needs to be considered, namely thinking about and carefully calculating various possibilities of success and failure, including obstacles or opportunities and the ability of the organization assigned the task of implementing the program. The author finds several indicators in carrying out policy implementation, namely:

1. Access

Access implies equal opportunity for all target groups, regardless of individual or group characteristics attached to them, such as gender, ethnicity, religion, and political affiliation.

2. Bias

Bias is an indicator used to assess whether the services provided by implementers are biased (deviant) toward community groups that are not targeted to enjoy assistance or services provided by the government through a policy or program.

3. Accuracy of Service

This indicator assesses whether the services provided in implementing a program are carried out on time.

4. Accountability

This indicator is used to assess whether the actions of implementers in carrying out their duties to convey policy exits to the target group can be accounted for or not.

5. Program Suitability and Needs

This indicator is used to measure whether the various policy or program outputs received by the target group are indeed following their needs or not

1.7 Conceptual Definition

A conceptual definition is a definition that is a limitation of research conducted in the field, which contains problems or problems that are used as guidelines in research or case studies in the field. Conceptual definitions are used to understand better and make it easier to describe or interpret from theories into research in the field. Thus, several conceptual definitions will be determined that are closely related to the Problem to be studied.

1.7.1 Evaluation

Evaluation is a Fulfillment of stages in measuring a policy to become a reference for the sustainability of future policies by looking at the positive and

negative sides of a policy which will be summarized into an important note for policymakers so that the policies made can run effectively.

1.7.2 Transit-Oriented Development (TOD)

Transit Oriented Development (TOD) is a restructuring of urban development by maximizing mixed land and integrating it with a healthy lifestyle (walking and cycling) and focused on mass-scale city transit facilities. TOD itself is widely seen in the concept of integrated construction of train stations and bus rapid transit as mass transportation facilities for commuters.

1.7.3 Transportation Connectivity

Transportation Connectivity is a connection, network, connection, or relationship that can facilitate (smooth out) all affairs (activities), interconnected states, or the ability to connect or communicate. Transportation connectivity can be described through the extent or effectiveness of the transportation network in an area by paying attention to several factors, such as a strategic location that can accommodate intermodal transportation and can benefit the community as users of transportation services.

1.7.4 Policy Implementation

Policy implementation is the stage of the realization of program objectives. In this case, what needs to be considered is the preparation of implementation, which is to think and carefully consider the various possibilities of

success and failure, including obstacles or opportunities that exist and the ability of the organization assigned the task of implementing the program.

1.8 Operational Definition

This research on the level of public satisfaction with MRT connectivity in Jakarta, Transjakarta, and the Jabodetabek Commuter Line at TOD Dukuh Atas refers to the Oberthur and Groen theory which has two dimensions that are used as indicators of policy effectiveness, namely: ITDP (2017),(Sulistyaningrum, 2018)

Table 1. 4 Operational Definition

Variable	Indicator	Parameter
Management of Transit-Oriented Development (ITDP, 2017)	Walk	Pedestrian facilities that are safe, comfortable, and complete so that they can be used optimally
	Cycle	Safe and comfortable bicycle lane facilities and the availability of sufficient bicycle parking space
	Connect	Direct connection of use that can facilitate access for private and public modes

	Transit	Facilities that facilitate pedestrian access in Transit
	Mix	Provision of complementary functions that can reduce travel time
	Density	The density of the area in the form of settlements and jobs that can support high-quality Transit and local services
	Compact	Development of TOD located in urban areas to facilitate travel in the city
	Shift	Reduction of motor vehicle service areas with the regulation of parking and vehicle circulation
Transit Connectivity (Sulistyaningrum, 2018)	Capacity utilization of Transit	<ul style="list-style-type: none"> a. Number of passengers at a busy time b. Number of Passengers when empty
	The transit system is user-friendly	<ul style="list-style-type: none"> a. Safety of commuters at transit stops

	b. Basic amenities Information display system
Access and	a. Frequency of transit service
Accessibility	b. The facility of transit mode Access to job opportunities within walkable distance of the transit node

Source: Proceed by Researcher (2022)

1.9 Research Methods

1.9.1 Types and Methods of Research

This research uses a qualitative approach by using the Nvivo 12 plus application to explain and display data in order to describe the phenomena that occur. Qualitative research is basically used to answer questions about the meaning and perspectives, experiences, and most often, opinions of authors (Hammarberg et al., 2016). Al-Hamdi, Sakir, Suswanta, Atmojo, & Efendi, (2020) explain that qualitative research is an effort and interpretation through the reality of life-based on the understanding possessed by the researcher. So it can be concluded that qualitative research is research based on observations, assessments, and realities that occur in the field and then processed into objective and relevant data.

In this study, researchers conducted field research in conducting data collection. The steps taken by researchers are to go directly to the field or

research place to observe and make observations and take data directly to find out the phenomenon directly in a natural state. So that the data collected is valid data and can be accounted for its validity.

1.9.2 Research Location

The research location is a place to carry out activities or research in order to obtain valid data from respondents. This research is located in the City of Central Jakarta, DKI Jakarta Province, precisely located in the Transit Oriented Development of Dukuh Atas in the Menteng district area.

1.9.3 Data Types and Data Sources

The types of data in this study used two types of data, namely primary data and secondary data.

1. Primary Data

As Moleong said from the thesis Anggraini (2018), Primary data is a source of data obtained directly from sources who are targeted for research without going through intermediaries in the form of information from the parties being targeted. This primary data was obtained by making observations, interviews, and with speakers involved in the use of the Jakarta MRT Transportation system, Transjakarta, and jabodetabek Commuter Line.

2. Secondary Data

Secondary data is data obtained indirectly by the researcher because it is only for information or complementary data obtained. The data can be obtained from someone's scientific work, literature review related to the title TOD Dukuh atas, Reports from the DKI Jakarta Transportation Agency, DKI Jakarta government website related to TOD Dukuh Atas, Social Media related to TOD Dukuh Atas, laws and regulations governing TOD Dukuh atas, as well as scientific work needed in research.

1.9.4 Data Collection Technique

Data collection techniques are techniques used by researchers to obtain information and collect the necessary data. This data collection helps strengthen the analysis and accuracy in the study. There are several steps including:

1. Observation

The first data collection technique is to use observation techniques. This technique is a technique that is often used in qualitative research because observation techniques are empirical scientific activities based on facts in the field (Hasanah, 2017). Not only that, but this research was also obtained through texts, experiences that saw directly without any manipulation.

The purpose of using this technique is to understand more deeply related to background, interpretive, or interactive forms that can support this research. The authors used participant observation, which is an observation that directly involves the author to be actively involved in the research environment

in order to collect data systematically. In this study, the researcher made observations and records directly to the field of activities that were in accordance with the object of study. Observations were made at TOD Dukuh Atas located in Central Jakarta.

2. Interview

After making observations, the next step in collecting data is to use the interview method. An interview is a conversation between two parties, namely between the source and the journalist or, in this case, the author. There are many types of interviews used in conducting research. In this study, the authors used interview techniques with an approach that uses general instructions. The interview technique in this study used the technique (In-depth Interview).

This type of interview gives the interviewer previously had a framework or outline of the questions to be asked sequentially (Anggito & Setiawan, 2018). So, later the researcher has compiled a big point of questions that will be given to the speakers to be answered. This is done so that the author can dig up more information from respondents so that the data obtained is more accurate. The mechanism used for interviews in this study was to submit an interview approval letter, then conduct an interview directly by giving questions in sequence to the speakers.

3. Documentation

Furthermore, the data collection technique used is documentation. This technique is one of the ways of collecting data through archives or books about theories, arguments, data, or laws that are closely related to research problems (Al-Hamdi et al., 2020). The author's goal is to obtain additional information and data that supports this study. In each documentation, collection aims to archive all series of research data collection activities. In addition, documentation techniques can also use archives from the DKI Jakarta Provincial Transportation Agency or individuals in writings or images from someone. Furthermore, these documents are analyzed for further processing and become the data that supports this research.

4. Ncapture

Ncapture is one of the features used in information processing to obtain data from internet platforms such as social media Facebook, Twitter, Instagram, and online news portals. Ncapture is downloaded in the Google chrome application, which is used to import data from news portals or social media, and then put into the nvivo 12 Plus data folder.

1.9.5 Data Analysis Technique

In qualitative research, data analysis techniques become the primary instrument to see the objectivity of the data. Data analysis is a process of finding and compiling the results of interviews, notes obtained in the field,

or from various sources that are then accumulated and put together to construct the findings into units to become important information (Rijali, 2019). Then, from the analysis, the conclusions were obtained on the object of research and became data reinforcement in the study conducted. One of the programs or applications used to perform data analysis is the Nvivo 12 Plus application. The data analysis was linear from the data collection to the final findings. Thus, the concepts, categorizations, and descriptions must be developed based on events that have been obtained in the field. Miles and Huberman (1992) provide an overview related to the data analysis process, namely:

a. Data collection

Simple data collection was an integral part of data analysis, carried out through interviews and documentation in this study.

b. Data reduction

Data reduction is an activity to conclude data, and then sort it into certain concepts, categories, and themes. The function of the results of this data reduction is processed to make it look complete. The forms can be in the arrangement of sketches, synopsis, matrices, and other conditions. Data reduction starts from creating a summary, making small notes, exploring themes, and analyzing relevant information in the study to facilitate the presentation and affirmation of conclusions.

c. Data Presentation

The presentation of data in qualitative research can be presented in narrative text, diagrams, tables, charts, or in the form of matrices.

d. Conclusion/Verification

Efforts in concluding are carried out continuously, starting from data collection. The researcher records the meanings, patterns, explanations, causes, and effects to increase the initially unclear data to become more detailed and precise. These conclusions are also verified by rethinking during the writing process, reviewing field notes, having discussions with others to develop intersubjective views, and other efforts to support the study's conclusions.

Therefore, the research results collected could be readjusted with the reduction and display of data that could be agreed as a scientific written report and had a high level of accuracy and trust. One of the applications used in data analysis was Nvivo 12 Plus, the latest version of the existing Nvivo application. The use of Nvivo software helped in the process of data reduction and presentation of coding results which can be in the form of graphs, diagrams, patterns, audio, and video data transcripts, correcting and analyzing test results, and can develop theoretical concepts whose sources come from data that has been obtained and existed before (Bandur, 2019). Some of the features used included:

a. Crosstab Query

Crosstab query is one of the techniques used to find out research variables that influence the object or focus of research studies with the results of displaying the percentage of numbers, graphs, and conclusions (Hai-Jew, 2020).

b. Cluster Analysis

The purpose of cluster analysis in Nvivo was to explore the correlation between one text and another. Cluster analysis is a technique used to analyze and group files, nodes, documents that have the same value so that researchers can find out similarities and differences based on distance. The cluster analysis results can be used to visualize: similarities and differences across files, similarities, and differences across file nodes (Ozkan, 2004). The cluster analysis in this study used the Pearson correlation coefficient, Jaccard's coefficient, Sorensen's coefficient (Jackson & Bazeley, 2019).

c. Coding Similarity

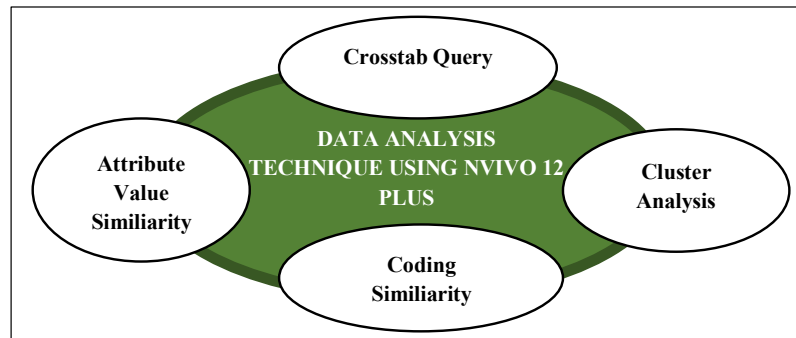
Coding similarity is comparing the results of coding between a file and a node. Files or nodes that have been coded are grouped based on high values and low values. The results of these values can be displayed in clusters (Hai-Jew, 2020).

d. Attribute Value Similarity

Attribute value similarity is an analysis that compares the attribute values of files or file nodes. Files or file nodes with high attribute values are

grouped in the cluster analysis diagram, while files or nodes with lower values are further grouped in cluster analysis (Jackson & Bazeley, 2019).

Figure 4. Data Analysis Techniques Using Nvivo 12 Plus



Source: Author's Analysis