Implementation of E-Parking Management Policy in Braga Area of Bandung City

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ABSTRACT

The purpose of this study is to analyse the implementation of the Regional Regulation Policy on Parking Management in the Braga area of Bandung city. This research is based on the fact that there are often parking arrangements that interfere with traffic flow so the functions and responsibilities of the government to overcome parking problems are questioned. The type of research in this study is descriptive qualitative, while the data is collected from interviews, observation, and documentation. The data was then analysed using the Nvivo 12 Plus application. The results showed that the implementation of public parking management policies in the Braga area of Bandung City has not been fully implemented because there are still violations committed by parking officers in the field. In serving the public in and out of vehicles in the parking lot has not been implemented properly, and many people do not fully understand the parking machine because the parking limit that should be used is sometimes there and sometimes not. Arranging parked vehicles so as not to interfere with traffic flow, is still not implemented because officers in the field are still parking officers who arrange vehicles on the edge of public roads exceeding one shap / one shap, the parked community is well implemented. The use of evidence (carcis) that has been corporatized by the Department of Transportation, Financial Management and Assets parking officers in using evidence (carcis) has not been implemented optimally because there are still parking officers who are dishonest and lack of socialising the e-parking policy to the community which results in a decrease in parking fees and illegal parking which makes illegal parking more and more.

Keywords: Policy Implementation; Parking Management; Technology; E-Parking

INTRODUCTION

The rapid advancement and development of information technology has led to a process of modernisation in society (Septiana, 2021). In general, the use of technology that is commonly used such as computing and internet networks. The influence of this technological advancement has a huge impact on people's lives in terms of economy, health, business and public services for the government (Habibie, 2019; Isharyanto Ciptowiyono, 2013; Maria & Widayati, 2020; Nahariah & Armita, 2022; Rusliadi et al., 2023). With the advancement of technology, it has a significant impact on government management, namely the development of a public service system through the internet network called e-government (Supriyanto, 2016). The use of
technology in government can in fact have a more efficient, effective and transparent impact in order to satisfy the public.

That is one of the reasons why the use of information technology can play an important role in the system of government services for the community. One important part of the use of technology in order to have a positive impact on society such as providing easy access and providing transparent value to the community. One of them is services in the field of transport and public, especially in the parking sector. To respond to this, an innovation emerged, namely electronic parking or electronic parking which is currently commonly known as (E-Parking) (Billqis & Suryawati, 2022).

E-Parkir or commonly known as electronic parking is a device used to measure parking duration and receive parking levy payments electronically (Hayati & Fanida, 2018; Permana et al., 2023). The purpose of this E-parking is to reduce illegal levies that cause not maximising local revenue. The benefit of E-parking is to realise effective and efficient parking services for the community by utilising technology towards smart cities (Artamalia & Prabawati, 2019).

The use of e-parking system can reduce several risks for the government, such as preventing leakage of parking levies that are still done manually, returns and calculation errors, besides providing protection when collecting cash. The implementation of e-parking aims to maximise Regional Original Revenue (PAD) and reorganise the parking lot. In the payment process using the e-parking system, a device called the Electronic Parking Terminal (TPE) is used.

Currently, the use of the E-Parking system has been implemented by several regions in Indonesia such as Medan City (Prasetya, 2023), Surabaya (Artamalia & Prabawati, 2019), Surakarta (Pradita & Utomo, 2021), Pekalongan (Susanto et al., 2017), Tarakan City (Sandra, 2021), and Bandung City (Suherman, 2020). Some of these cities have implemented the use of E-parking systems with the reason for complying with traffic regulations is still low and also influenced by the density of vehicles that have not been supported by adequate parking space, as well as illegal levies that are still carried out by parking attendants into the background of the use of e-parking systems to optimise local revenue from parking fees.

The Bandung City Government has also implemented an E-Parking system according to Article 1 point 14 of Bandung City Regional Regulation Number 5 of 2018 concerning Amendments to Regional Regulation No.22 of 2011 concerning Retribution for Special Parking Places (hereinafter referred to as Regional Regulation Number 5 of 2018 and Regional Regulation Number 22 of 2011) states that: "Electronic Parking is a parking service using electronic parking machines. Based on the provisions of the article, as a Bandung regency that wants to achieve the nickname Smart City, it tries to apply this electronic parking concept to the city of Bandung, considering the application of e-parking by taking the Bandung road area because of its short roads and tourist city and to increase local revenue (hereinafter referred to as Minister of Communication and Information Regulation Number 8 of 2019).

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Bandung is the capital city of West Java Province, with a strategic potential for on-street parking. This is because the city of Bandung is a large administrative area and has wide roads. The determination of the location of on-street parking is regulated in the Mayor's Decree number 551/Kep.648-DisHub/2017 concerning the application of the location and position of parking on the edge of public roads and special parking spaces in the city of Bandung. In the Bandung city regional regulation No.4 of 2017 concerning amendments to the Bandung city regional regulation number 16 of 2012 concerning the implementation of transportation and retribution in the field of transportation.

Parking on the edge of public roads is one of the sources of local revenue from parking service levies (Law Number 28 Year 2009). Therefore, it is not surprising that parking retribution is one of the main sources of revenue for the region. Another reason is because Bandung city is a famous tourist city, many visitors from various regions want to visit Bandung city to travel, therefore the Bandung city government is well aware of the huge potential income from the public roadside parking levy sector for domestic tourists who bring vehicles.

The purpose of implementing this electronic-based parking service system is not only to maximise parking levies and prevent potential misuse of funds managed, but also to ensure that the levies paid by parking service users are received by the Bandung City Government. The purpose of using TPE is to improve parking administration that was previously inappropriate and to minimise illegal parking fees (Pribawana & Kurniadi, 2018). In addition, TPE was chosen to replace the manual parking system with parking attendants acting as cash receivers of parking fees. With the manual system, the leaked parking retribution reached 16 billion rupiah annually (Qohar, 2018).

Although various studies have been conducted that discuss the E-Parking system in Bandung City. However, from the results of the researcher's search using Publish or Perish by entering the keywords "E-Parking and Bandung City" only 9 documents were found from 2014 to 2023. So it can be said that research related to E-Parking in Bandung City is still relatively small. The research only discusses aspects that affect the implementation of E-Parking in Bandung City (Rachmawati & Dwi Fitriyanti, 2021), Electronic parking terminal policy in Bandung City (Qohar, 2018), effectiveness of the E-Parking programmer (Imaduddin, 2021), the effectiveness of parking tax and levy on the effectiveness of local revenue of Bandung City (Religia, 2014). This research is also different from the research that will be discussed in this study, because this research will discuss the implementation of Regional Regulation No. 12 of 2001 concerning parking management policies implementing the E-Parking system in Braga, Bandung City.

METHOD

This research will use qualitative methodology. Qualitative method is chosen as a tool to analyse, understand, explain and find out the implementation of Regional Regulation No. 12/2001 on parking management policy of E-Parking system implementation in Bandung City, especially on Braga Street. This research uses Grindle's theory with indicators of 1) power, interests and strategies of the actors involved. 2) characteristics of institutions and authorities. 3) responsiveness compliance (Grindle, 2017). Data collection techniques were carried out by
interview, observation and documentation (Rahardjo, 2011). After the data is obtained, the data is then analysed and interpreted to be developed, with the stages of data reduction, data presentation, and data verification to obtain conclusions in the form of findings for further research and then analysed using Nvivo 12 Plus (Miles, Huberman, 2014; Woolf & Silver, 2018).

RESULTS AND DISCUSSION

In the implementation of Regional Regulation Number 12 of 2001 concerning parking management, the implementation of the E-Parking system in Bandung City, especially on Jalan Braga Bandung City, has a parking tariff which can be seen in Table 1.

Table 1. E-Parking Costs for Jalan Braga, Bandung City

<table>
<thead>
<tr>
<th>Bus/truck</th>
<th>Four-wheeled vehicle/three/etc.</th>
<th>Motorbike</th>
<th>Freight transport</th>
<th>Truck / Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDR 7000/hour</td>
<td>IDR. 5000/hour and the next hour plus IDR. 5000</td>
<td>IDR 5000/hour and every subsequent hour an additional IDR 5000</td>
<td>IDR 3000/hour and the next hour plus IDR.3000</td>
<td>IDR 7000/hour and thereafter pay IDR 7000.</td>
</tr>
</tbody>
</table>

Source: Processed by researchers, 2023.

From Table 1, it can be seen that the parking fee rates on Jalan Braga Bandung City have different rates. The highest estimated rate is Rp. 7000/hour which is given to buses/trucks/containers, while the rate of Rp. 5000/hour is only for four-wheeled vehicles and motorbikes. While freight transport is only charged at Rp. 3000 / hour.

In addition, the parking system provides local revenue retribution for the city of Bandung. However, in the period 2018-2020 the realisation of parking contributions in Bandung City has decreased. This can be seen in Figure 1.

![Figure 1. Parking levy on local revenue of Bandung City in 2018-2020](image)

Source: Processed by researchers from data from the transport office, 2023.
From Figure 1, we can see that in 2018 the parking levy in Bandung City provided local
revenue of IDR 541,510,000. However, in 2019, the revenue from parking contributions
decreased to IDR 534,474,000. It then decreased to IDR 476,587,000 in 2020. This decline
certainly has problems that need to be resolved. One of the reasons for the low parking retribution
in 2020 is due to the realisation of higher local revenue. Then there are individuals who make
profits due to the lack of supervision of parking attendants. In addition, another problem that
occurs is that the e-parking facilities and infrastructure on Jalan Braga, Bandung City are
neglected because they are damaged. The analysis related to the problem of e-parking system
utilisation can be seen in Figure 2.

Figure 2. E-Parking Utilization Problems
Source: Processed by the researcher from Nvivo 12 Plus, 2023.

From Figure 2 above, it can be seen that from the results of interviews and observations
conducted, several problems have occurred in the use of e-parking machines in Bandung City
such as the state of damaged machines, the age factor of the machine, the lack of supervision
which has an impact on the practice of rogue parking attendants who still use manual parking
payments. So that it becomes one of the obstacles to the maximum implementation of Regional
Regulation Number 12 of 2001 concerning parking management implementing the E-Parking
system in Bandung City. So it is necessary to have strict supervision and regular maintenance
of electronic parking machines carried out by the Bandung City Transportation Office.

Therefore, to see the extent of the implementation of the Regional Regulation Policy on
Parking Management in the Braga area of Bandung City using the theory of Grindle (2017), it
can be explained as follows:
1. Power interests and strategies Actors involved

In a policy, it is also necessary to take into account the power or power, interests and strategies used by the actors involved in order to smooth the course of implementing a policy. The first implementation environment variable is power, where the highest implementor power involved in this implementation is the Transportation Agency. Furthermore, the technical power in the field is the Head of UPTD Parking South Region. The power and authority in organising socialisation activities remains with the Bandung City Transportation Agency because in this case UPTD Parking is only an implementor in the field, meaning that it does not have the power or authority to decide policies in policy implementation.

The strategy applied in implementation determines the success of policy implementation such as socialisation to improve the quality of implementation actors, especially parking attendants. The socialisation in question is to explain the tasks that must be carried out by parking attendants in carrying out their duties and if violations are found when a joint inspection is carried out between the Transportation Agency staff and the police, immediate action will be taken.

The case is actually very much an obstacle for the Bandung City Transportation Agency Government, because the worse the socialisation will hamper the smooth running of a policy, the community also hopes that this policy can be a satisfaction so that they can feel satisfaction in making this e-parking policy. Socialisation of a programme or policy is very important to achieve the objectives of a programme or policy (Mursalim, 2017).

In this case it is certain that the socialisation conveyed by DISHUB officers must be clear both from the leadership and from officers to the community. The way that the leadership does is by providing supervision to all Transportation Agency officers to be able to provide information about making e-parking policies. However, this becomes a problem when the information and socialisation conveyed is not conveyed properly, if the Transportation Agency provides good socialisation to the community, then that way the community will be less aware of the purpose and use of this e-parking machine.

2. Characteristics of Institutions and Rulers

In the implementation of regional regulation policy on the management of E-parking Number 11 of 2001, the characteristics of the institutions and authorities involved, namely the Bandung City Transportation Office, determine whether this implementation policy is carried out smoothly or otherwise. The Department of Transportation determines whether the policy issued can be implemented properly or not because it is the only regime in power in managing the implementation policy on e-parking. The Department of Transportation of Bandung City in the success of the implementation policy by controlling the behaviour of parking attendants so far is still not good at providing services in the eyes of the community.

The government of the Bandung City Transportation Office should provide briefings on good service procedures to the public. This condition illustrates that the Transportation Department government does not coordinate the staff and parking attendants well, so that the people of Braga, Bandung City understand the intentions and objectives of the Transportation Department, so that the implementation of Regional regulation policies runs so that unwanted things do not happen. In the implementation of strategy and authority is the authority or legitimation for implementers in implementing policies that have been determined politically.
Authority and strategy are formal to avoid the failure of the implementation process because it is seen by the implementer as unimplemented. But in another context, the effectiveness of authority can shrink when it is misused by implementers for personal or group interests. Therefore, it is necessary for the Transportation Agency to carry out strategies to implement this e-parking policy and appeal to the performance of staff and parking attendants.

3. **Responsiveness Compliance Level**

Based on the results of the research, there are many points of parking locations scattered on Jalan Braga Bandung City which are inhabited by illegal or unofficial parking attendants, which are used as parking lots outside the supervision of the Bandung City Transportation Agency, the number of illegal parking locations on Jalan Braga is caused by individuals who do not obey the rules or life factors and economic crush. So that there is still illegal parking, the reason is because it is more practical and easy to make payments, not complicated.

The Bandung City Government itself as the manager of the e-parking policy related to the number of illegal parking spaces on Jalan Braga, which is one of the causes of the congestion that every day colours Jalan Braga, cannot and evenly turn a blind eye and state that it is not a problem.

This results in many employees who have not complied with the implementation of the e-parking policy, as well as people who feel dissatisfied with the services of parking attendants resulting in illegal parking which can affect parking retribution revenue. So we can see that in implementing policies related to regulations on e-parking management on Jalan Braga, Bandung City is still not optimal, this is because parking attendants who are objects that carry out regulations made by the government make policy makers the target of not running this policy effectively. Because if policy is viewed as a system, then policy can also be viewed as a process.

The e-parking policy of the Transportation Department government has made many strategic efforts to be able to solve all the problems regarding parking, but despite all these efforts to solve parking problems, the character factors of the leaders involved in the implementation of this policy are still less assertive so that it seems that there is an omission in the policy so far, giving rise to a form of non-compliance from the implementers.

Based on the theory used in examining the electronic parking management policy in Bandung City in terms of this, it can be said from the first aspect that the Power, Interests, and Strategies of the Actors Involved are very important for the achievement and desired goals. Implementors in this case will be the most potential parties to influence and influence the implementation process. The power of interests and strategies of the actors involved are quite clearly seen through a series of activities that occur in the field. The way that the leadership does is by providing supervision to all Transportation Agency officers to be able to provide information about the making of this e-parking policy as well as its uses and objectives so that implementers can carry out their programmes and the community as users can clearly know the use of this e-parking.

Second, Characteristics of Institutions and Rulers The government of the Bandung City Transportation Office should need to provide briefings on good service procedures to the community. because for the community it is the government's obligation to serve the community as well as possible. The government of the Bandung City Transportation Office should need to
provide briefings on good service procedures to the community, because for the community it is the government's obligation to serve the community as well as possible.

Third, the level of compliance and responsiveness of the e-parking policy, the Transportation Department government has made many strategic efforts to be able to solve all the problems regarding e-parking, but apart from all the efforts to solve the parkii problem, the character factors of the leaders involved in the implementation of this policy are still less assertive so that there seems to be an omission in the policy so far, giving rise to a form of non-compliance from the implementers.

This problem proves that policy implementation in the field does not always match the ideal regulations and the reality on the ground. There is always a gap in negligence / neglect of both what is achieved properly. This is because in the policy content, namely in relation to the desired Degree of Change, there are still many obstacles with the weak sanctions given to rule breakers, so there needs to be affirmation and the need for understanding of the implementers. Plus the service of parking attendants so far has not been optimal, coupled with the increased parking rates so that people are reluctant to pay for parking according to the rules. Then seen from the implementation environment with the power and interests will maintain parking attendants or other officers who do not obey the rules.

### Discussion

The study aimed to analyze the implementation of the Regional Regulation Policy on Parking Management in the Braga area of Bandung city, focusing on the challenges faced and the effectiveness of the policy. The research utilized a descriptive qualitative approach, collecting data through interviews, observation, and documentation, and analyzed the data using the Nvivo 12 Plus application. The findings revealed that the implementation of public parking management policies in the Braga area of Bandung City has not been fully effective due to various issues such as violations committed by parking officers, inadequate public service in the parking lots, and lack of understanding of the parking system by the public. Additionally, there were challenges related to the use of evidence (carcis) and socializing the e-parking policy to the community, leading to a decrease in parking fees and an increase in illegal parking.

The findings of this study align with previous research on parking management and urban policies. For instance, Girón-Valderrama et al. (2019) highlighted the focus on on-street parking in parking policies, especially in areas where the supply of parking spaces does not meet the demand. This aligns with the challenges identified in the Braga area, where improper parking arrangements affected traffic flow. Furthermore, Ukam (2020) emphasized the importance of efficient parking resource utilization, which resonates with the findings of inadequate public service and violations committed by parking officers in the Braga area.

Moreover, the study's findings are consistent with the work of (Sarker et al., 2020), which discussed the implementation of smart parking systems and dynamic pricing. The challenges identified in the Braga area, such as the lack of optimal implementation of evidence (carcis) and dishonesty among parking officers, underscore the need for smarter algorithms and improved user experience in parking management systems.
CONCLUSION

The form of implementation activities is to create an electronic parking machine that has been running until now, the purpose of the Transportation Agency to make this e-parking machine policy is to get maximum retribution and eliminate illegal parking for the safety of the community in leaving vehicles, and avoid traffic congestion. From the results of the research analysis regarding the Implementation of Regional Regulation number 11 of 2001 concerning the management of e-parking in the Braga area of Bandung City, in this study it can be concluded based on the theory allowed, namely grindles, which is the researcher's theory, that the policy has not been effective in its implementation, this can be seen from the implementation in the field there are shortcomings experienced by the Transportation Department, namely: 1) Strategic power of the actors involved: That there are still many people who do not know the e-parking policy because of the lack of socialisation, as well as the lack of supervision of the transportation department to service officers and parking attendants, because of this, problems arise that result in new obstacles and problems. 2) The characteristics of institution and ruler, then the characteristics of institution and ruler, the Transportation Department has been good in providing its leadership style. As well as implementing well the Parking Levy on the Edge of Barga Street is one of the levies collected by the local government of Bandung City which is mandated by Law Number 33 of 2004 concerning Financial Balance Between the Center and the Regions, as a form of government administration provides the authority to regulate and manage the administration of government, so that the region can explore the potential resources it has to increase Regional Original Income (PAD), in the context of implementing local government. Therefore, commitment from all stakeholders is needed, because a policy will not run well if the people involved in it do not comply with / carry out the policy in accordance with applicable regulations, so high awareness is needed, not sectoral ego or concerned with the interests of certain groups. To improve a policy, it is mandatory to always conduct socialisation to the field so that a policy is implemented to the local community, a power will not advance if its subordinates do not carry out what is ordered by its limits, it must also be supervised to maximise the work of each task. 3) Compliance Responsiveness, Lack of follow-up or sanctions for e-parking officers or people who are reluctant to use e-parking machines, to provide a deterrent effect to dishonest jukirs, and people who do not want to use e-parking machines. Deterrent effect on dishonest jukirs, and people who do not want to pay for parking and prefer to use or pay for illegal parking. Pay for parking and are more willing to use or pay for illegal parking.

REFERENCE

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