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Adapting to The Pandemic COVID-19: Smart City Implementation in Blitar City

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Abstract: *COVID-19 seriously hitting most countries worldwide is an alarming issue affecting the mindset of the Indonesian government. Many studies have revealed that the outbreak has forced the government to make some adjustments by seeking smart solutions that are effective and efficient for public services, which has brought the government to the concept of a smart city. Departing from this background, this research aims to investigate how Blitar City is struggling to adapt to the situation by adjusting to the Smart City implementation. This research found that, guided by qualitative research methodology and the Smart City theoretical framework, the desire for changes in terms of public services from citizens is relatively high. However, the lack of a legal basis for the smart city in Blitar City seems to hinder the objective. Furthermore, there is a vague understanding of the concept that is hampered by some local agencies (Dinas) and civil servants. Therefore, local regulation relating to the concept is required to ensure the implementation of smart cities in Blitar City. The Readiness of all actors in Blitar City also needs upgrading in order to maintain the long-term Smart City implementation at a local level.*
Keywords: *Blitar City, Covid-19, Governance, Smart City.*

Introduction

The COVID-19 pandemic has hit various countries in the world, leaving tremendous implications on many aspects of life (Yang & Chong, 2021). The rapid spread process, coupled with the increasingly destructive and dangerous nature of the virus from time to time, makes various forms of socio-political change completely unavoidable. The socio-political changes then manifest in various adaptation efforts made by many countries to ensure the safety of their citizens.

Directly, these socio-political changes can also be seen from the number of countries that have finally decided to enforce lockdown during the pandemic (Jaiswal et al., 2020). By continuing to try to formulate solutions to prevent the virus through medical research, the lockdown policy, which was followed by limiting the activities of citizens, had to be chosen even though it was overshadowed by the risk of a prolonged economic depression. The pandemic situation has directly confronted various countries in the world with new challenges that they had never imagined before.

In Indonesia, the pandemic is also responded to with unreasonable measures, ranging from anti-science practices performed by public officials, miscoordination between the central and

local governments, and the difficulty of disciplining the public to comply with health protocols, all of which seem to be dominant issues resulting from the pandemic in Indonesia over the past year. Mietzner (2020), one of the thinkers in the socio-political field, even said that the precarious situation was evidence of the government's inappropriate responses to the pandemic, leading further to a prolonged policy crisis. (Mietzner, 2020).

Consequently, the incidence of infection cases has soared to thousands. As of March 2020, the number of confirmed cases of COVID-19 in Indonesia reached 1,348 people, and 136 of them were declared dead, with a Case Fatality Rate (CFR) percentage higher than China (8.9% vs 4%). (Setiati & Azwar, 2020). The situation even worsened until mid-2021. The national data of the Covid-19 Task Force Team showed that in July 2021 the number of confirmed positives soared to more than 5000 cases, with a death toll of more than 300 cases. (Tim Satgas, COVID-19, 2021). This situation increasingly places Indonesia in the red zone cluster of the COVID-19 pandemic.

In a more specific observation, the situation at the national level also reflects the urgency of the COVID-19 pandemic at a local level. In this case, Blitar City deserves serious attention following its status as a red zone in Indonesia in July 2021 (Naufal, 2021). With the virus spread rate reaching 57.88 percent and the addition of the number of cases reaching 4,810 cases, or around 3.2 percent of the total population, as of July 19–25, 2021, Blitar City is in the list among other cities, placing East Java Province as the epicenter of the pandemic in Indonesia (Hasani, 2021).

Furthermore, to deal with this precarious situation, the Blitar City Government itself ultimately strives to provide alternative solutions to deal with the spread of COVID-19. Efforts to control the spread of this virus are not only carried out by implementing a social restriction policy whose initiative is instructive from the central government, but it is also followed by an adaptation policy of governance carried out by optimizing the Smart City program at a local scale. The Blitar City Smart City program itself has been designed since 2019 by the local government but has only acquired a more relevant place since the COVID-19 pandemic, which created new demands for the provision of stable public service facilities and supports the prevention of coronavirus infections.

Through the demands for the implementation of public services that must remain optimal in a pandemic situation, coupled with the new task of the local government to monitor and anticipate the spread of the virus at a local level, the implementation of Smart City in Blitar City has begun to be evaluated periodically. Every Smart City practice that has been carried out before has even started to be reviewed to ensure that every element of governance is still able to meet public needs and ensure mutual safety. In this process, evaluation of Smart City implementation is generally carried out with orientation by considering several aspects: facilitating coordination of policy implementation, governance management, and technology operation to prevent the situation from worsening due to coronavirus infection (Yang & Chong, 2021). This reality has certainly shown directly that the COVID-19 pandemic has also contributed to encouraging the development of smart city initiatives at the regional level (Shi et al., 2021).

On the other hand, although the COVID-19 pandemic has directly encouraged the acceleration of Smart City implementation, the various dynamics in the acceleration process need more attention. Blitar City, as the case study in this research, has experienced a strong dynamic in the process of adapting to Smart City governance during the

pandemic. The unpreparedness of the superstructure, structure, and infrastructure foundations shows that the Smart City acceleration process in Blitar City does not come without issues. In a more in-depth study, researchers even find that the dynamics of implementing Smart Cities also face perplexing conceptual obstacles, making the evolution process of governance more energy-consuming. This situation definitely calls for a high level of accuracy.

Departing from the above situation, this study attempts to conduct an in-depth investigation of various dynamics, obstacles, and problems encountered in the process of adapting governance through the implementation of Smart City in Blitar City during the pandemic. The entire analysis will be integrated into two main discussions. The first part will provide an analysis of the evaluation and barriers to implementing Smart City in Blitar City in the face of a pandemic, and the second part, which is also the last part of this research, will provide a description of steps to improve Smart City implementation that the local government can perform to avoid the negative implications of the pandemic while maintaining the quality of public services in the long term.

The study of smart cities has received more attention from policy, socio-political, and urbanization thinkers regarding urban problem solutions. Quoting from Fang's statement (2021), the Smart City study discourse, which is widely understood in various scientific fields, makes the Smart City concept appear with its respective approaches or characteristics. (Fang et al., 2021). Generally, these different characteristics or approaches can be understood through three important aspects contained in the Smart City concept, namely: the process of providing theoretical narratives, strategies, and the actors involved.

There is a strong dialectic among socio-political thinkers before finding a comprehensive definition of the Smart City. At the beginning of the 19th century, the basic concept of Smart City was defined simultaneously with the development of the industrial revolution that occurred in many parts of the world (Albino et al., 2015). As a result, the basic substance of Smart City is limited to aspects related to ICT development, and the implementation process in the field cannot be separated from efforts to make people smart by designing city governance that is identical to advances in information technology (Alawadhi et al., 2012).

Only then, a few years after the euphoria of the industrial revolution began to decline, did the basic concept of the Smart City begin to be questioned. Several thinkers then proposed a new identification that was more comprehensive and in accordance with the development of socio-political dynamics at that time. During this period, the Smart City concept then obtained a more comprehensive definition, as expressed by Ismagilova (2019), implying that Smart City is a city governance mechanism that prioritizes the ability to improve people's quality of life, local economy, transportation, management, environment, and community interaction with the government (Ismagilova et al., 2019). The ability to manage the city well in this case is illustrated by the availability of all kinds of facilities, both in the form of soft domains and hard domains, that are able to encourage the development of urban communities to the fullest (Albino et al., 2015).

With the development of the conceptual definition of Smart City, the main substance and dimensions of the Smart City concept have also experienced a significant expansion. Although there are different views among socio-political thinkers regarding the number and

substance of the Smart City indicator arrangement, in general, there is still one pattern in common. In other words, the differences between socio-political thinkers in formulating Smart City indicators are only caused by the focus/tendency/interest of these thinkers in exploring the Smart City concept, not by efforts to create changes in the basic substance of the Smart City concept itself. Therefore, in this research, these differences do not have a significant effect and will not receive a sufficiently in-depth theoretical study portion.

On the other hand, in this study, the Smart City indicator used was chosen based on the scope of the research conducted. The dimensions of the Smart City used in this study are a description of the Smart City according to (Giffinger et al., 2007) and (Batty et al., 2008), all of which can be further explained as follows:

a. Smart Economy: Innovative Spirit, Entrepreneurship, economic image & trademarks, productivity, flexibility of labor market, international embeddedness, ability to transform.
b. Smart People: level of qualification, affinity for lifelong learning, social and ethnic plurality, flexibility, creativity, cosmopolitanism, open-mindedness, participation in public life.
c. Smart Governance: participation in decision making, public and social services, transparent governance, political strategies & perspectives.
d. Smart Mobility: local accessibility, (inter) national accessibility, availability of ICT-infrastructure, sustainable, innovative, and safe transport systems.
e. Smart Environment: Attractive of natural conditions, pollution, environmental protection, sustainable resource management.
f. Smart Living: Cultural facilities, health conditions, individual safety, housing quality, education facilities, touristic attractivity, social cohesion.

In the same scope of discussion, to deepen the research findings, the researcher also uses the concept of "Smart City Readiness" to assess the readiness of implementing Smart City in Blitar City. The concept of Smart City readiness comprises three important elements to consider, namely: structure, superstructure, and infrastructure. Details about all these elements can be understood through the following description:

a. Structure: people, management, and capital.
b. Infrastructure: Physical, digital, social.
c. Superstructure: law, inter-institution, enforcement.

In practice, all these theoretical indicators are used comprehensively to uncover all the dynamics in the implementation of Smart City during the COVID-19 pandemic in Blitar City. The use of these overall indicators is also the best way to measure every Smart City implementation practice at the local level. By using this mechanism, this research will gradually contribute by filling the scientific gap in Smart City research, which so far has only focused on the formal aspects of Smart City without paying attention to studies on the readiness of implementing institutions.

Method

This study used qualitative research methods to reveal the process of implementing Smart City in Blitar City to deal with the COVID-19 pandemic. With primary and secondary data collected from interviews and documentation, the researcher explores each piece of data obtained and presents it with theoretical analysis in accordance with the research framework. The type of case study approach in this research is also used to help researchers explore each research finding in more depth and comprehensive analysis.

Result and Discussion

Blitar Smart City: The Problem of Readiness

During the impactful COVID-19 pandemic hitting the City of Blitar, the process of optimizing the implementation of Smart City began to receive serious attention from stakeholders. The availability of the Blitar Smart City program since 2019 is expected to be the latest solution in dealing with the risks of the COVID-19 pandemic. At this point, the Smart City implementation process was finally reviewed with a series of in-depth and comprehensive evaluation processes.

In the evaluation process, using three measurement frameworks for the readiness of Smart City implementation, researchers found three sets of problems present as obstacles in implementing Smart City during the pandemic in Blitar City:

a. Structural Problem: Often overlooked by Smart City reviewers, structural problems, including the design of Smart City supporting institutions, still become strong impeding factor in the effort to succeed in implementing Smart City at a local level. Studies on institutions and their readiness have not yet received a proper portion, especially because the focus is still on seeing institutions as only formal managerial practices in managing Smart City. whereas on a wider scale, attention to institutions also needs to be extended to touch on the design of institutions to the level of democratic stability of an institution in helping to implement Smart City imperatively (Dameri, 2017) (Noori et al., 2020). In the context of Blitar City, structural problems arise in two ways: the absence of a special institution in the form of a "Smart City Council" whose task is to examine, evaluate, and accelerate the implementation of Smart City at the regional level, and the problem of cognitive gaps from Smart City organizers at a technical level. The two elements of structural problems, in particular, create internal obstacles in the implementation of Smart City, which at the same time shows the immaturity of institutional foundations in efforts to accelerate Smart City during the pandemic period in Blitar City.
b. Infrastructure Problem: infrastructure, without doubt, is an important aspect in implementing Smart City. In other words, the availability of infrastructure is a key variable to measure the level of readiness and maturity of Smart City implementation (Supangkat et al., 2018). In terms of infrastructure, the obstacles experienced by the City narrowed down to two main matters, namely: inefficient data center facilities for controlling and managing data during the pandemic and the unavailability of a service integration mechanism on a single platform. In the context of data center inefficiency, this is evidenced by the unavailability of a data update mechanism in data center services. Meanwhile, on the problem of service integration, it is evidenced by the publication of the Evaluation Results of the Implementation of the Blitar City Bureaucratic Reform in 2020, which states that there is still a need for service integration practices.
c. Superstructure Problem: In contrast to the two previous problem categorizations, superstructure problems are very identical to the legal aspects in implementing Smart City. In the context of the City of Blitar, the problem of the superstructure leads to the absence of a legal basis in the implementation of the Smart City program. The absence of legal narratives that can fortify the implementation of Smart City in Blitar City has caused two major losses to occur in the Smart City acceleration process: first, the lack of concrete and

standard definitions that can serve as guidelines for implementing Smart City will correlate with the lack of Smart City development initiatives themselves. From the same point of view, this condition will also have more implications for the emergence of a distinction between e-gov and Smart City (Pratama & Imawan, 2019). At this point, the relevant stakeholders often fail to draw clear policy boundaries between Smart City and E-Gov. Second, the absence of the legal protection for implementing Smart City, in addition to showing the existence of a local government bureaucracy that is premature in dealing with governance changes, also shows an unclear pattern of setting goals, stages, dynamics, and directions for implementing Smart City. The absence of legal protection will increase the potential for the emergence of egoism and unhealthy competition between OPDs in the accelerating Smart City.

Lack of Coordination of the Local Agencies and Civil Servants

The acceleration of Smart City initiatives during the pandemic does provide a good opportunity to understand effective approaches to implementing Smart City initiatives (Shi et al., 2021). However, in further practice, these opportunities do not come into existence in a relatively short time. A long and consistent process is needed to take advantage of this opportunity to realize the most relevant Smart City initiative implementation scheme.

In the case of Blitar City, the Smart City implementation scheme during the pandemic period was not formed optimally. The reason is the lack of coordination and intensive collaboration between actors (local agencies) in implementing Smart City. This is evidenced by the results of the researchers' findings, which show the lack of evaluation and coordination between OPDs in the implementation of Smart City during the 2019–2021 period. This coordination crisis occurs especially for the OPD, which is responsible for implementing Smart City support programs in the areas of Smart People, Smart Economy, and Smart Living.

In practice, the lack of coordination between OPDs in the implementation of Smart Cities ultimately makes the direction of Smart City implementation unable to develop optimally. The absence of a forum for OPDs to submit evaluations, complaints, and ideas in the implementation of Smart City seemingly makes the Smart City implementation process stagnant. This ultimately makes the Smart City program a low priority on the agenda for handling the pandemic in Blitar City.

The lack of coordination and evidence in which the practice of implementing Smart City still tends to be low priority on the government's agenda is basically influenced by several factors.

Referring to Liu's opinion (2018), two important factors influence the level of coordination between institutions, namely internal factors that are closely related to organizational structure/formation, networks and available resources, and external factors related to political, economic, and social issues (Liu & Zheng, 2018). In the case of Blitar City, the main factors that influence the practice of coordination crisis in the implementation of Smart City are internal factors that are directly related to the problem of the related institution.

As previously explained, the absence of a legal basis for implementing Smart City at the local level is strong evidence that internal problems are the reason for the emergence of inadequate coordination practices. The legal loophole results in the absence of two important aspects in Smart City coordination, namely the loss of the obligation for local

OPD to coordinate the implementation of Smart City and the loss of authority for the community to be involved in every agenda to implement Smart City coordination and evaluation at a local level. This condition certainly makes the practice of implementing Smart City in Blitar City in dealing with the COVID-19 pandemic run inefficiently. In practice, this situation also puts low-level offices in a perplexing situation to determine the important steps and policies that must be taken to implement Smart City effectively and efficiently (Heclo, 1977).

Turn Back Covid-19: Construct the Law, Set the Readiness

Basically, the legal basis has a very significant role in every implementation of Smart City policy. The legal aspect is even very helpful in identifying barriers to Smart City policies and can directly support the implementation of every aspect of Smart City while preventing the most undesirable issues from happening (Decker, 2014). That is, legal protection and various aspects of it play a very important role in the development of Smart City implementation itself.

Therefore, in the context of Blitar City, various problems that arise, including coordination crises, structural problems, and Smart City infrastructure, are basically the core that sparks the legal loophole of the Smart City program itself. For that, we need a special scheme to make a permanent solution to these problems. Thus, providing a concrete and comprehensive legal basis is one alternative that can be taken to ensure every Smart City practice can run optimally and measurably, especially in alleviating the pandemic and ensuring public safety in the long term.

A Smart City with a clear legal basis for the program will make the existing implementation pattern more realistic and support the transformation process of governance optimally (Lumbanraja, 2021) (Kumar et al., 2020). In a deeper understanding, the availability of the legality of the Smart City program will also gradually ensure that every step and policy supporting Smart City can be carried out by all OPDs at a regional level, so that Smart City will simultaneously become a joint project in reforming public service governance. This, of course, will also directly accelerate the process of solving structural, infrastructure, and superstructure problems in the implementation of Smart City in Blitar City.

Conclusion

Although the Covid-19 pandemic has opened great opportunities in optimizing the implementation of Smart City, the results of this research show that is taking these opportunities is quite challenging. The push for optimizing Smart City as a form of adaptation to governance during the pandemic still faces many obstacles mainly related to the readiness of regional institutions. This research has succeeded in showing that these obstacles cover various aspects, but the two main elements are the loss of program legality at the regional level and the crisis of coordination in the implementation of Smart City. In the end, although optimistically the Smart City policy in Blitar City is still very relevant to be exercised in dealing with the Covid-19 pandemic, various other policies must be reformulated to correct the inappropriateness of Smart City implementation as found in this research. The formulation of the Smart City policy base, which is accompanied by the issuance of a series of other supporting programs, can be an alternative solution to resolve the pandemic while maintaining Smart City policies in the long term.

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