JKAP (Jurnal Kebijakan dan Administrasi Publik)
Vol.27 (1), May 2023, 65-79
ISSN 0852-9213 (Print), ISSN 2477-4693 (Online)
Available Online at https://journal.ugm.ac.id/jkap

Local Wisdom in Smart City Development Policy: Case Study of Makassar's Sombere Smart City

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Abstract

The city of Makassar is an example of smart city development practice and considered successful in emerging with a new policy innovation. The city was able to build a smart city not only based on information technology (IT) but also involves a local wisdom called "sombere". The value of sombere in the life of the people of Makassar is a manifestation of the attitudes and behaviors that includes friendliness, kindness, and care. This study examines how the application of sombere local wisdom in supporting smart city-based policy in Makassar. This study uses qualitative methods with case study designs. Data collection is carried out through interviews, observations, and documentation, and were analyzed using an interactive model. The results showed that the value of friendliness, kindness, and care in sombere is the key to a successful implementation of smart city policies. Sombere could maintain the policy so that it remained sustainable and easily accepted by the people of Makassar. Local wisdom significantly has a positive effect on each service and program created. However, in some of the programs, local wisdom is difficult and even too forced to combine with the smart city program. The dimensions that are well supported by local wisdom are found in the dimensions of smart governance, smart living, and smart society. Meanwhile, the dimensions of the smart environment and smart economy are difficult to combine local values with the use of technology. Moreover, the value of local wisdom seems to be just a slogan in smart branding.

Keywords: *smart city; local wisdom; indigenous cultures; policy innovation; development policy*

INTRODUCTION

Various cities in the world are building and implementing smart cities in the context of community services. The concept of smart city is categorized as an innovation and, thus, can contribute to solving problems in the community and increase the quality of public service (Pradana, et al., 2023, 2022). The smart city provides solutions for city and local governments in seeing various urban issues led by them (Dameri, 2013). A city can be said to be smart if it can perform smart planning in the process of developing and implementing local strategies by using top-down (managed and promoted by national and local entities) and bottom-up approaches (which arise from the needs of city residents and users) to make gradual improvements through user engagements and capabilities offered by technology (Cowley & Caprotti, 2019).

The concept of a smart city is always linked to the use of technology for the development and integration of infrastructure and services as an innovative solution to the process of identifying existing problems and solving them as quickly as possible and as effectively and efficiently (Nam & Pardo, 2011). In addition, to meet the needs of the community along with the development of technology, a smart city is an innovation in public services that can adjust to the needs of a very complex and sophisticated society. (Alim et al., 2019)

In addition to information and communication technology, there are three factors that drive the development of a smart city namely organizational governance, institutional governance, and human resources (Chourabi et al., 2012). In other cities, the models that have been widely developed are the Giffinger model and the Cohen model. Meanwhile, for the Indonesian context, the model that is developing and widely used is the Citiasia model, which is also referred to by the Ministry of Communication and Information of the Republic of Indonesia (Menkominfo), and the Garuda Smart City Framework (GSCF) (Anindra et al., 2018; Effendi et al., 2016).

Some cities also implement smart cities based on contextual considerations in their respective regions. For example, by considering the differences in the organizational structure of government between one city and another, smart cities can achieve success if the city can place a strong foundation for possible factors which include institutional management, technology, human resources (Myeong et al., 2018; Young & Lieberknecht, 2019). Furthermore, the consideration of whether the form of government is democratic or not, the geographical conditions of the urban area to be implemented by the smart city policy, and the institutional governance component is also important in the development of smart city (Arief et al., 2020).

However, few studies have examined the aspect of local wisdom values to support the success and sustainability of policy innovations to be implemented (Pradana et al., 2022; Covell, 2016; Kurniawati et al., 2019a). Local wisdom can be an important aspect or addition in the development of new concepts (Munandar et al., 2018). Indigenous cultures or traditions can be used as one of the resources or added values that enable smart cities to make maximum service to the community as a top priority (Alim et al., 2019; Rulinawaty et al., n.d.).

Several cities in Indonesia had implemented smart city concept in their governance (Kencono & Iqbal, 2021). For example, through the application of Bandung smart city, Bandung is one of the cities that is the object of many study related to smart cities in Indonesia (Alim et al., 2019; Wulandari & Munawaroh, 2020a). However, it is found that not all people can follow the smart city development carried out in Bandung. According to some authors, the applications of smart city in Bandung are not yet friendly to the community or local government, as well as around the existence of social issues or problems that occur in underprivileged communities (Nilma, 2018).

In understanding the “smart” in Smart City, Vogl (2012) argues that it is not only “smart” in terms of its nature (i.e., the use of IT). Instead, it also represent a smart and attractive approach that combines infrastructure, technology, and local community engagement based on a vision for the future that considers existing conditions, capabilities, and resources. Consequently, smart cit-

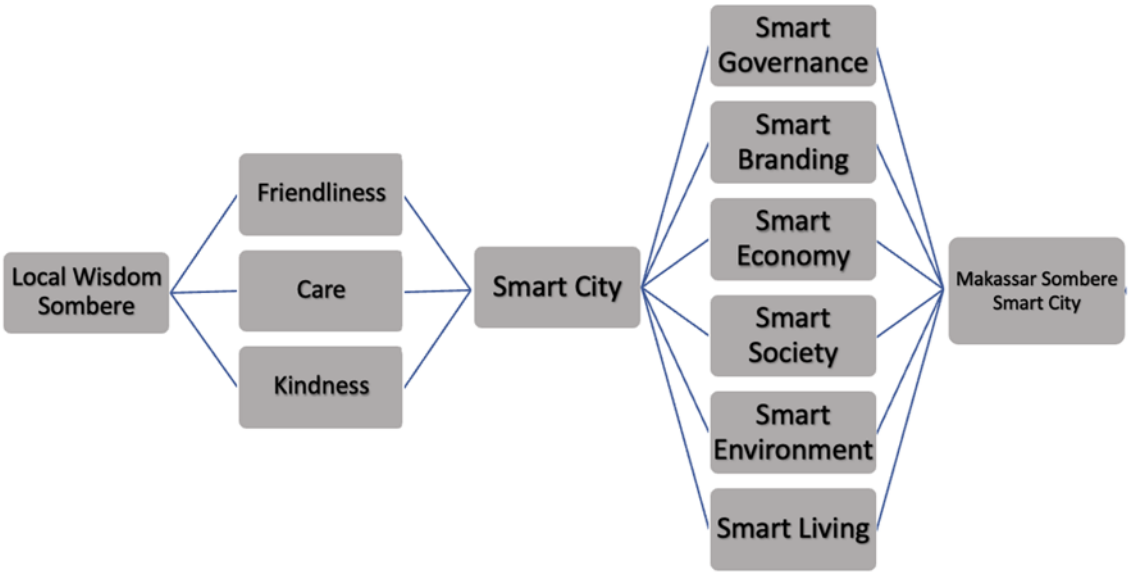

Figure 1. Theoretical Framework

ies include the information technology dimension, social dimension, and other dimensions of urban life in a smart or intelligent way to improves the quality of our lives (Vogl, 2012).

This study uses the city of Makassar to examine the implementation of smart city in Indonesia. Makassar is an important case to analyze because the city developed a new concept of a smart city by combining the use of information and communication technology with the values of local wisdom rooted in the Makassar community itself (Hamzah & Syarif, 2020; Jusman et al., 2018; Madani & Nasrulhaq, 2017a; Nurdiassa et al., 2021; Sari et al., 2022; Wahyuni et al., 2021). The development of smart cities should pay attention to various factors other than just the use of information technology. The smart city concept promoted by the Makassar government shows a smart approach because of its initiative to combine local wisdom with the smart city (Madani & Nasrulhaq, 2017b; Reza, 2017; Saptadi et al., 2018, 2020) so that the policies and programs that will be implemented can be easily accepted and run at the same time by the community (Aziz & Djunaedi, 2022; Martinus, 2020; Nasrullah, 2017; Suardi et al., 2022). The local wisdom that the city adopted as part of implementing the smart city concept is called "sombere", which means friendliness, kindness, and care (Amri, 2016; Hardi & Gohwong, 2020; Harlina & Mustafa, 2018; Mahesa et al., 2019a; Manguluang, 2016; Wulandari & Munawaroh, 2020b).

There are few studies in the smart city literature that examine the dimension of local wisdom in the development of smart city, particularly in regards to realizing smart city development (Covell, 2016, 2017; Kurniawati et al., 2019a; Paskaleva et al., 2017; Sutriadi, 2018). In addition, there is no research that comprehensively discusses how local wisdom enters every dimension of a smart city (Aurigi, 2022; Kusumastuti & Rouli, 2021; Permana et al., 2022). Most only focus on one or two dimensions (Adisasmita et al., 2022; Chen & Long, 2021; Haerani et al., 2019; Rudwiarti et al., 2021; Sutresno & Singgalen, 2023). Even in Indonesia, local wisdom is not used optimally by cities in trying to build smart cities with a blend of local wisdom (Ghofur & Ismanto, 2022; Harsiti et al., 2020; Hasan, 2021; Savira & Tasrin, 2018). Nonetheless, the city of Makassar makes local wisdom the fundamental value of their smart city development (Hamzah & Syarif, 2020; Nurdiassa et al., 2021; Wahyuni et al., 2021). This is what makes Makassar an interesting case to study. There are only six dimensions known, namely the dimensions of smart governance, smart economy, smart society, smart brand-

ing, smart living, and smart environment (Arwanto & Anggraini, 2022; Cohen, 2012). What distinguishes this article from the concept of smart cities, in general, is that this model is designed to adjust the conditions of infrastructure in Indonesia, which is not evenly distributed properly, and that the existence of local values from each region can be used to produce smart city solutions formulations to existing problems (Asnawi, 2021; Effendi et al., 2016; HENDRAR et al., n.d.; Kurniawan, 2020; Mukhlis et al., 2021; Purnaya et al., 2019).

Therefore, the issue of smart city development in Indonesia is also carried out by cities/regencies, each competing to implement it (Firmansyah & Supangkat, 2022). This article analyze the Makassar Sombere Smart City policies implemented by the city government. The concern is that the smart city dimension is combined with local wisdom values which makes it unique from the smart city concept in general because all the dimensions of the smart city in Makassar are combined with the value of the local community. Taking insights from the perspective of the influence of local wisdom in the context of applying the smart city dimension, this study seeks to explore how can local wisdom collaborate in the development of smart cities to achieve the success of programs and applications built by the Government. This research will provide a major theoretical contribution to the literature on smart city development because there are factors and new perspectives in seeing the concept of successful smart city policy development, namely from the local wisdom value factor that is collaborated. Empirically, it will contribute to the smart city-based policy development process in the city of Makassar in Indonesia, as well as in various parts of the world. This paper will contribute to the development of the concept of smart city development which is not only focused on the use of information and communication technology but also pays attention to factors that trigger success, namely social factors such as local wisdom, whose final concept is socio-technical policy development.

Local Wisdom

Local wisdom is a local cultural value that can be used to control the order of life of communities wisely (Johannes et al., 2022; Khusniati, 2014). In the discipline of anthropology, it is known as local genius. Local wisdom is ideas, knowledge, beliefs, values, norms, morals, as well as ethics, institutions, and technology that contribute to the formation and the continual maintenance of the state of life order of citizens in various fields, progress, and maintaining the state of the ecosystem area and resources so that its use by groups or human communities there (as one of the components of the ecosystem) takes place on an ongoing basis (Affandy, 2017; Almaarif & Wargadinata, 2022).

This research has some relevance for studies that discuss how the city is prepared to build a smart city and how local wisdom is collaborated in the development process of several dimensions of a smart city, for example in the environmental and tourism dimensions. However, in another study, Some authors found that local wisdom seems to be just a word deposit and does not fully explain how the concept of local wisdom is integrated into the existing smart city concept (Fitriani et al., 2018; Kurniawati et al., 2019b; Mahesa et al., 2019b; Mozūriūnaitė & Sabaitytė, 2021; MZ & Marzuki, 2019). Then to find out how local wisdom has collaborated on each dimension of existing smart city development, the concept from Cohen (2011) is used, namely, there are 6 dimensions of a smart city including the dimensions of smart government, smart economy, smart society, smart branding, smart environment, and smart living (Shah et al., 2017). The concept is used to measure how far where local wisdom can be collaborated to every dimensions of smart city (Figure 1).

Smart City

A smart city is defined as a city that can use human resources and social capital investment, transportation, and modern telecommunications infrastructure to realize economic development and a higher quality of life (Cowley & Caprotti, 2019; Schaffers, 2010), with wise management of energy sources through the government based on

citizen participation or participatory governance (Giffinger & Gudrun, 2010). Other experts suggest that a smart city is a broad, integrated approach to improving the efficiency of a city's operations, improving the quality of life of its residents, and improving the economy of its area. Smart city is further defined by weighting the aspect of the area into smart use of ICT (Manville et al., 2014). Smart City is a city that recognizes the cases contained in it (sensing), controls the situation of the case (understanding), and can control (controlling) various energy sources that are available to be used efficiently and effectively to optimize services to its citizens (Supangkat et al., 2018).

According to Cohen (2011), smart cities are identified based on 6 main dimensions, namely smart government, smart economy, smart society, smart mobility, smart environment, and quality of life:

1. Smart Government refers to the principles of Good Governance. The main key to smart governance aims to reduce inequality, not only to ensure equitable physical development in each region but also to increase the professionalism of apparatus performance that is responsive to the needs of citizens supported by advanced communication and information technology.
2. Smart Economy is a kind of program to empower citizens through the lowest level such as micro, small, and medium enterprises and cooperatives to promote innovation and business competition that can foster a sense of entrepreneurship.
3. Smart Society urges social life in urban areas to be more conducive. These include elements such as belief, mutual aid, tolerance, appreciation, and social cooperation.
4. Smart Branding or building a collective imagination of the city. Practicing city branding must have a genuine Government alignment to achieve goals and achieve something that the brand is based on.
5. Smart Environment, viewed in terms of the use of buildings so as not to result in the destruction of the area and methods of managing natural energy sources.
6. Smart Living, the quality of life of residents can be seen in terms of health and safety in their environment. So that it can create a more conducive and higher quality area for the community.

METHOD

This research use a qualitative approach with case study strategy. Qualitative research is a study that is often used to understand social phenomena (Creswell, 2016). Case study strategy is selected so that researchers can understand and know empirical conditions or realities about programs based on smart city dimensions combined with local wisdom concepts (Ghony & Almanshur, 2012). The case study in this research adopts Yin's (2014) design in qualitative research based on a single case study, in the form of a local wisdom concept in smart city development in Makassar Sombere smart city. As case study research, the proposition in this study is based on a theoretical proposition (Creswell, 2015). The proposition gives priority to the analysis strategy.

This research consists of two types of data collection, namely primary and secondary data. The primary data are derived from informants in this study, namely the ASN of the Regional Development Planning Agency (Bappeda) of Makassar City, the ASN of the Communication and Information Office of Makassar (Diskominfo) and the ASN of the Makassar Health Office (Dinkes) (see Table 1). The researchers chose these informants because they are the implementers and policymakers, both programs and applications, who are most involved in various smart city policies in the city of Makassar. Secondary data includes the results of previous research, newspapers, or news (Latkovikj & Popovska, 2019) related to the Makassar sombere and smart city policy program.

The technique used in determining informants in this study was the purposive sampling technique. Purposive sampling is used with the consideration that the informant knows the whole phenomenon or certain things expected by the researchers, making it easier for the researchers to study the phenomenon/object under study (Creswell & Creswell, 2017; D. Sugiyono, 2010). For this study, the researchers choose the informants

Table 1. Research Informant

No	Name	Agency
1	FI	Bappeda Kota Makassar
2	IR	Bappeda Kota Makassar
3	IV	Bappeda Kota Makassar
4	AT	Bappeda Kota Makassar
5	NA	Dinas Kesehatan Kota Makassar
6	IN	Dinas Kesehatan Kota Makassar
7	MA	Dinas Kominfo Kota Makassar
8	JU	Dinas Kominfo Kota Makassar
9	SU	Dinas Kominfo Kota Makassar
10	IS	Dinas Kominfo Kota Makassar

based on certain considerations, such as people who are considered relevant and understand their conditions and capacities in building and developing smart city development policy innovations in Makassar. Researchers conducted data collection techniques through interviews with informants who were deemed relevant to research questions (Miles, Huberman, and Saldana, 2014), such as those who sustain the policies and innovations that have been and will be carried out, conducted consultations on policies and programs that have been running, and documented other supporting data. The research instrument in this study is the researchers themselves (Valente et al., 2015). The position of researchers in qualitative research is very important due to the ability of researchers to make observations, interviews, and documentation in obtaining data and information primary and secondary (Ahmad, 2015; Silvi, 2018).

Researchers will adopt a process for analyzing data that consists of 4 components of activities, namely: data collection, data presentation, data condensation, and drawing conclusions and verification (Miles, et al., 2014). Researchers conducting data validity are tested through data triangulation. This study uses source triangulation and engineering triangulation. The use of source triangulation is because the process of extracting information is carried out by cross-checking every informant both in Bappeda, Diskominfo, and Dinkes who are involved in the creation of local wisdom-based smart city programs. Thus, the validity of the data in this study is trying to be maintained using multi-sources and evidence.

FINDINGS AND DISCUSSION

The smart city development program in Makassar is not just about smart city, but the development has combined two big concepts, namely the smart city concept and the local wisdom concept. This happens because the government builds a smart city without forgetting the local wisdom that lives in the people of Makassar and is deeply rooted in the lives of the Makassar people. Sombere is local wisdom that means friendliness, kindness, and concern for others. With the value of sombere, the government hopes that the relationship between the government as a service provider and policy-makers with the community as a recipient of services and policy recipients can go hand in hand and establish good harmony, especially in realizing the development of Makassar smart city into a world-class city.

The philosophy of the smart city concept is the change in people's mindset from manual to analog technology and from conventional systems to digital systems. In terms of policy-making, this process of mindset change will be difficult, especially if it is carried out largely in an urban context

because it is considered to be difficult for the community in adjusting to existing developments. Because of a culture that is deeply rooted in the community, the concept of local wisdom is key for people to change their mindset by using the local wisdom approach. The application of sophisticated and advanced information technology will be easily accepted and used as well as possible by the community if the use of technology can be brought to life by combining the values of local wisdom that live in the community itself. With local wisdom, the culture of the community will easily adjust to the development of the city of Makassar.

The Value of Sombere in the Development of Makassar Sombere Smart City

The value of sombere as a local wisdom is alive and becomes a noble value that characterizes the hospitality, kindness, generosity of smiles, and concern for others of the people in Makassar. These values are always taught to every generation of Makassar society. These values of politeness and friendliness make sombere a value that is used and tried to be incorporated into every development policy of Makassar smart city.

The researchers found that local wisdom sombere is used and utilized to regulate the order of people's lives by seeking it to be included in the programs and services of the smart city in Makassar city. This local wisdom is certainly able to move people to live wisely. Khusniati (2014) also emphasized that local wisdom is a local cultural value that can be used to regulate the order of people's lives wisely.

The development of a smart city that pays attention to local wisdom is certainly an appropriate thing to do by the government, particularly with the combination of the concept of local wisdom and the concept of a smart city. The city government has made the development of smart city easier and more acceptable to the community. This is in line with the concept proposed by Vogl (2012), which argues that the smart city development process is not only focused on developing information technology to meet the needs of the community and solving problems that occur in the community, but also recognizing and using other factors that can support the performance of the policy. In smart cities, smart not only about adopting information and communication technology but also shows a smart and exciting approach to building sustainable cities that combines infrastructure, technology, and local community engagement based on a vision for the future that considers existing conditions, capabilities, and resources. Consequently, smart cities include the information technology dimension and social as well as other dimensions of urban life in a smart way to improve the quality of life.

In addition, the government is doing a step that can be considered appropriate, because, to make a sustainable policy that can be used well by the community through the use of local wisdom values, it has also indirectly maintained the local wisdom so that it is always conserved and used by the people. One of the steps to maintain these local values to always exist is to integrate them into existing policies. The sustainability of this local wisdom needs to be developed through science and combining it with technology that is beneficial for human lives. Makassar in developing smart cities always makes application and service programs based on the six dimensions of the smart city by Cohen (2011) to develop programs based on the needs and better public services that the government is trying to fulfill.

Manifestation of Sombere in Makassar Sombere Smart City Policy

The manifestation of sombere value in Makassar smart city is implemented in various policies that have a positive impact on these programs and applications. The manifestation of local values of sombere in the form of friendliness, kindness, and care, or other terms such as hospitality makes the programs and applications more easily accepted and applied by the people of Makassar. As an informant from Bappeda asserted,

> *"This sombere will play a very important role in the sustainability of a policy, because in the beginning, this policy was the noble value of the community, so the community as the recipient of the service and the policy will be very welcoming with the various applications and policies*

offered. Because of that, sombere became the spirit of all smart city policies and applications created. So that the policy lives on and facilitates community activities, the government is good to make policies because the policies will be friendly and make it easier for the community." (Interview with IR, [06/06/2022])

Every policy, whether in the form of a program or application created, must include a sombere value in it. Applications and programs made in every dimension are also named with local terms whose purpose is to make it easier for the public to recognize the program. They also become a local brand because the programs or applications made no longer seem new to the community because, in terms of naming, they have taken terms from the local language of the Makassar. Information technology which can be interpreted as rigid and new in urban life is transformed by sombere into something user -friendly.

Local Wisdom in The Dimensions of Smart City Development

Smart cities are built as solutions to existing problems, both directly and indirectly, with a focus on the development and application of information and communication technology. Smart cities are also defined as cities capable of using human resources, social capital, and modern telecommunications infrastructure to achieve economic growth and high quality of life, with prudent resource management through community participation-based governance. In the case of Makassar, the smart city is presented not only with the use of information and communication technology but also combined with local values that live in the community itself (Caragliu et al., 2011; Schaffers, 2010).

These two big concepts are side by side and integrated and support each other for the successful implementation of policies made by the government. Applications and programs made with the use of advances in information and communication technology have finally become staple instruments in the implementation of smart city policies. However, the application of this technology is supported by the combination of local wisdom values in every application and service. The result is that people are less likely to face difficulties in using the applications or technologies because local values make the service much more user-friendly and easier to use by the community.

In the application of smart cities based on the six existing dimensions, there are several dimensions in which the role of local wisdom seems to dominate, while in some dimensions local wisdom is less effective to facilitate the successful implementation of existing services and programs. In certain dimensions related to the fulfillment of administration and public services, local wisdom values play a more stronger role. However, in other dimensions that are less related to service products, it seems difficult to see the dominance of the local wisdom to realize the success of the program. Furthermore, local wisdom does have a significant positive effect on every service and program created. But in some programs and services, local wisdom seems difficult to combine and even seems to be that local wisdom is too forced to be combined with the smart city program.

In some programs, it is even difficult to find aspects of the smart city because the development and management of the programs is not even based on the use of information technology. Instead, the programs seems to use the aspect local values more so it's difficult to argue that such programs are part of a smart city program that are combined with the existing concept of local wisdom. There are also some programs and services that, because of the difficulty of adopting and combining local wisdom values with these programs and services, the city government instead opted to name the programs using local languages and terms. From the perspective of the community this can be seen as an added value because it is perceived as locally-rooted. However, the choice of words and terms are often not appropriate and seems forced to look suitable for existing services.

From the six dimensions, the dimension of smart environment and smart economy are seen as the dimensions that are more difficult in terms of combining local values

with the use of technology to fulfill services to the community. The output of a smart environment that will carry out environmental management and preservation programs with the use of technology is considered as more difficult, apart from the fact that the interaction of a smart environment seems less oriented towards direct community service. Cohen (2011) defines smart city by weighting environmental aspects through the uses of ICT smartly and efficiently in utilizing various resources, resulting in cost and energy savings, improving service and quality of life, as well as reducing environmental footprint, to support an innovative and an eco-friendly economy. Therefore, the development of a smart environment is rather difficult to incorporate local values because the development of a smart environment is more focused on using technology to realize environmental sustainability in urban development. Smart environments are also only aim to create programs and services that are based on smart environmental management (Cohen, 2011, 2012). There is a lack of indicators that should be initiated from the field of environment and planning that can play an important role in the concept of smart cities. However, the smart city framework consists of data that is easily measured with ICT technology or ICT data statistics (hard data). That's what makes local values seem difficult to incorporate into the programs.

Another dimension that is difficult to combine with the existing local value is the smart economy. Because the government must be careful in making related policies, the application of a smart economy to make people's lives more prosperous is addressed with full consideration. However, the smart economy dimension does not only revolve around ordinary people but also includes businesses and entrepreneurs. This makes it difficult for the government to create programs and services that can bridge the needs of each of these groups. The value of local wisdom in the program also seems less significant because the existing value seems too forced to be combined with the use of information and communication technology.

For the dimensions of smart governance, smart living, and smart society, the value of local wisdom is more significant because these three dimensions do produce programs and services that are accessed by the community directly. This is in line with the core concept of smart governance which is sociotechnical or the unity between social values and the application of technology. The items in the concept of smart governance are public services, bureaucratic management, and public policy efficiency (Civil & Nasrulhaq, 2017). In addition to the development of human capital, social capital development is also carried out, as the smart city is a city with human and social capital investment, with transportation and modern communication infrastructure as well as economic development and high quality of life, with wise natural resource management through participatory governance. One of the social capitals is the use of local values to build smart cities (Giffinger & Gudrun, 2010; Giffinger & Pichler-Milanović, 2007; Myeong et al., 2018). On the other hand, the local wisdom values in the smart branding dimension seems to be just a slogan. This happens because the programs and services resulting from smart branding are only based on the concepts of smart governance from the government without discussing or even touching the particularities of local wisdom values used.

In the process of developing smart cities along the six existing dimensions by incorporating the value of local wisdom, it is hoped that the programs and services that are created will be more successful when combined with the value of local wisdom. However, it is also worth reviewing that not all dimensions in the dimension of smart city development will be matched and is able to be combined with local values.

CONCLUSION

The conclusion of this research highlights three substantive points. First, in making smart city-based policies, Makassar city government attempt to integrated its programs and services with the values of sombere, in the form of friendliness, kindness, and concern for the community. As a result, the application of sophisticated and advanced information technology can be easily accepted and utilized as much as possible by the community.

Second, the role of sombere seems to

dominate in several dimensions of smart city development. In dimensions that are directly related to the fulfillment of public services, the value of sombere plays a more significant role. However, in several other dimensions, sombere value is weaker to produce more for the successful implementation of existing services and programs. Even with dimensions that are not related to direct service products, sombere is difficult to make the policy work.

Third, dimensions of smart environment and smart economy are difficult to combine the values of sombere with the use of technology. Meanwhile, the dimensions of smart governance, smart living, and smart society have been successfully combined with local wisdom values. The dimension of smart branding with the value of sombere seems to be just a slogan.

However, this study has two limitations. First, researchers have difficulty reaching vital informants, such as the Mayor of Makassar, to explore more deeply the broader ideas and concepts of local wisdom that the city government is trying to integrate with smart city policies. Second, this research is more focused on the social-technical aspects regarding the extent to which local wisdom is used to support the programs and applications that have been made. Thus, future research is expected to focus on management perspectives such as planning, organizing, directing, and supervising city governments in the development and innovation of smart city-based policies in collaboration with existing local wisdom values.

ACKNOWLEDGEMENT

Thanks are conveyed to the Indonesia Endowment Funds for Education (LPDP) of Republic Indonesia for funding this article in full.

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