

Smart governance for smart city

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Abstract. Some of the local government in Indonesia claimed they already created a smart city. Mostly the claim based of IT utilization for their governance. In general, a smart city definition is to describe a developed urban area that creates sustainable economic development and high quality of life by excelling in multiple key; economy, mobility, environment, people, living, and government. For public services, the law guarantees good governance by setting the standard for e-government implicitly including for local government or a city. Based on the arguments, this research tries to test the condition of e-government of the Indonesian city in 34 provinces. The purpose is to map e-government condition by measuring indicators of smart government, which are: transparent governance and open data for the public. This research is departing from public information disclosure law and to correspond with the existence law. By examining government transparency, the output of the research can be used to measure the effectiveness of public information disclosure law and to determine the condition of e-government in local government in which as part of a smart city.

1. Introduction

At 1997, World Forum on Smart Communities, it was estimated that some 50,000 cities and town around the world would embrace “smart” initiatives by the year 2000 [1]. Smart City emerges from the need for an urban concept that can provide a sustainable living for its citizen as increasing urban populations. By 2050, United Nation estimate 53% (fifty-three percent) of the population will live in urban [2]. In the meantime, from Indonesia population around 53% of its 253 million people living in urban in 2014 [3]. Main goal implementing smart city is to improve the quality of life of its citizens. Another goal is to promote investment and create a sustainable urban environment [4], but practically smart city concept oftentimes associated with the use of technology. Misleading conception on smart city implied to the objective of the local level or public official to utilize technology [5]. A smart city can also define as a subtle performing city in a forward-looking way in economy, people, governance, mobility, environment, living. Keen combination of local government activities for its citizens also can be term as smart city. In general, the smart city refers to the search and identification of intelligent solutions which allow modern cities to enhance the quality of services provided to citizens [6].

Regarding information and technology, smart city mainly based on information exchange that flow between its many separate subsystems and creating ecosystem inside sustainable framework for public services. In legal perspective, vigor framework for ICT may enhance freedom of speech and



create openness to access public information. The colliding concept of smart city and legal conception also reciprocal with the goal of the law itself to pursue prosperity by improving the quality of life. On the other words, the smart city also has similarity with good governance to optimize public services. They are intertwining between legal concept and city concept. Normatively, in legal concept, smart city was defined as good governance, but in ICT perspective more or less as an information sustainability exchange. Regarding information and technology adoption in public services, the law No. 14/2008 on public information disclosure is a legal instrument to interpret smart city concept as a point view in juridical thinking.

This paper will discuss smart governance, at a municipal level by assessing their transparency to give public information. According to the law of public information disclosure, public information can enhance citizen participation taking part in decision-making to monitor local government managing their city, and the use of technology can acknowledge barriers [7]. The adoption of innovation, on the other hand can create transparent and data openness, which are standing for indicator [7] of smart governance from the six elements of a smart city [9].

Table 1. Smart City Characteristic

Six Characteristics	Most 3 Indicators
Smart Economy	• Entrepreneurship and Innovation (14) • Economic Vitality and Planning (13) • Productivity(6)
Smart Environment	• Environmental Sustainability (25) • Monitoring Pollution Degree (7) • Energy Management (7)
Smart Government	• ICT and E-Government (13) • Transparent governance & open data (12) • Participation in decision making (6)
Smart Living	• Healthcare Services (18) • Social Security and safety (15) • Housing Quality (12)
Smart Mobility	• Public Transportation System (33) • ICT Infrastructure (19) • (Inter)national accessibility (5)
Smart People	• Social and Cultural Plurality (15) • Education System and Facilities(11) • Creativity (6)

Sources: Purnomo, 2016.

Through transparent governance and open data, the citizen has an opportunity to be involved in the government decision. Implementation of transparent governance and open data using two factors, nature of information – such as the classification of information disclosure, and tools to access the information or informational right is regulated under the constitution and sectoral law like the Law No. 14/2008 on public information disclosure. Commission of Public Information is the guardian of public information disclosure, but in reality, they are fundamental problems to enforce the regulation, for instance: Internet infrastructure, human resources, technology readiness, and cultural behavior. In spite of the problems, there are is no precise empirical evidence to justify the effectiveness of public information disclosure law, and to prove that open data for a public condition in local government level. In the meantime, the Internet user in Indonesia significantly increases 34,9% from 2014 to 2016, with estimate today"s Internet user more than 132,7 million or more than half of citizen population [10]. Based on the growth of the Internet user, crystal view of public information is required to discuss for optimizing public services. The reason to focus on a municipal level, because Public Information Commission of Indonesia has a research report on the state institution at ministry, not on a local government.

2. Method

In accordance to measure legal effectiveness, this research not only discusses legal norm but use combining with empirical data. For that reason, this paper uses empirical-legal research method or popularly known as socio-legal studies [11]. Even though in terminologically „socio“ in legal studies is not stand literally for sociology studies, but to describe empirical evidence to see the effectiveness of the law [12]. From the reason above, this type of research is combining between the doctrinal method with empirical evidence to evaluate an implementation of public information disclosure law. Empirical evidence was collected by inspecting 98 cities in Indonesia through their website, whether they provide information for public. The instrument of the assessment for this paper was using the law number 14/2008 regarding public information disclosure, which consists of announcement, providing and serving information to the public. Internet research method was selected to achieve objectivity to measure legal effectiveness on public information law. By observing the city's website, they cannot manipulate their data regarding public information.

3. Results and Discussions

3.1. Good Governance

The term “good governance” was first mentioned, causally, in the 1989 World Bank's report [13]. “Governance” itself means: the process of decision making and the process by which decision is implemented (or not implemented) [14]. Practically, human development cannot be sustained without effective governance, that is why governance cannot be sound unless it sustains human development. According to UNDP in 1997, building the capacity for good governance is a primary means eradicating poverty. Human development also a process of enlarging people's choices, achieved through expanding human capabilities and functioning's. The process includes three essential capabilities for human development-leading long and healthy life, be knowledgeable and having a decent standard of living. However, according to United Nation Relief and Work Agency (UNRWA), the realm of human development goes further, not only on the areas of political, economic and social. but also for being creative and productive to enjoy self-respect, empowerment and a sense of belonging to a community [15].

World Bank also noted, the scope of good governance include public sector management, accountability, transparency, and creating technical regulation to optimize public services. Good governance is creating an effective political framework conducive to private economic action: stable regimes, the rule of law. For public sectors, state management and administration can be efficient if adapted to good governance to perform strong civil society [16]. In Administration law perspective, good governance can raise impact of welfare state, while government placed at the party who's responsible for citizen welfare and by empowered all fields of community life with its intervention. This intervention not only based on legislation but under certain circumstances, that may act without relying on legislation, but based on its own initiative through *freies ermesen*, it raises concern among citizen [17]. Later, good governance became tools to ensure governments role to prevent despotism. In Indonesia, good governance became straightforward lawsuit from citizen to government. On the other hand, government shall refer to the good governance as their consideration. To balanced government power and citizen role, they are some of principle in good governance, namely: consensus, accountable, transparent, responsive, equitable and inclusive, effective and efficient, follows the rule of law, and participatory [18], in which those principle known as the characteristic of good governance.

3.2 Transparent Governance and Open Data for Public

Around 50 years ago the United Nations recognized the right to information as a fundamental democratic right. This concept was reflected in article 19 of the United Nations Universal Declaration of Human Rights. Later, in the 1990s, transparency was still complicated and seen as a marginal phenomenon mainly limited to journalists, scientists, and certain societal groups, which then changed to all citizens with the introduction of the Internet. In modern times, transparency typically framed as movement that not only governments and academia, but also corporations. Now days, around 70 countries now have freedom of information law [19]. Transparency means: decision and enforcements done in a manner that follows rules and regulations, and it also means that information is freely available, understandable accessible to those who will be affected by such decision and their enforcement [19]. In Indonesia, regulation acknowledgement for good governance is known as transparency. Several laws related to good governance in Indonesian law, can be describe with table below.

Table 2: Legal Definition of Transparency

Regulation	Description
Law No.28/1999 on Corruption, Collusion and Nepotism	Principles that open themselves to the right of the people to obtain correct, honest, and non-discriminatory information about the administration of the state with due regard to the protection of individual human rights, class and state secrets.
Law No.9/2004 on Administration Court	Refer to definition as stated in Act No.28/1999
Law No. 25/2009 on Public Service	Each service recipient can easily access and obtain information about the service required
Law No.5/2014 on State Bureaucracy	In the management of ASN is open to the public.
Law No. 23/2014 on Regional Government	Principles that open themselves to the rights of the community to obtain correct, honest, and non-discriminatory information about the administration of the country with due regard to the protection of individual human rights, class and state secrets.
Law No. 23/2014 on Government Administration	The principle that serves the community for gain access and obtain correct, honest, and non-discriminatory information within the administration of the government with due regard to the protection of personal rights, class, and state secrets.

Beside transparency, United Nation also apoint the element of transparency in Indonesian legal system [21]. According to those regulation, the elements of transparacy can be shown as table below.

Table 3. Legal Elements of Transparacy

Regulation	Principle
1. Law No. 28/1999 on Good Governance; 2. Law No. 9/2004 on Administrative Court; 3. Law No. 5/2014 on State Civil Aparatus, and 4. Law No. 23/2014 on Local Government.	1. Open to the rights of the community; 2. Correct, honest and non-discriminatory information; 3. Governing the State/administration; 4. The protection of personal rights, class, and state secrets.
Law No. 25/2009 on Public Services	1. Every recipient service; 2. Easy access and obtain information about the desired services.

The principle of transparency also provides an opportunity for the citizen to communicate constructive responses and criticisms to the government, to assess the government [22]. The operationalization of good governance principles is mostly dependent on access right to have to government information. Providing citizens needs of information also guarantee informational rights, in a way government open access to monitor public services. If the government responsible and effective runs their services, open access become necessity. With open access, the citizen is allowed to contribute and to evaluate decision making process as an integral part of democratic country [23].

In assessing transparency vis-à-vis access to information, things need to consider is nature of the information itself. Furthermore, the derivative concept requires: relevancy, quality, consistency, process and the procedure to access information, which means that the main principle in providing information on the transparency concept is the validity of information [23]. Related to transparency, Indonesian government guarantee that the citizen has a right to obtain public information through the law of public information disclosure. As a part of human rights, as stated in Universal Human Right Declaration, right of information also written in 1945 Indonesian constitutions, as manifested of legal state as mentioned, both *rechtstaat* concept and *rule of law* concept. According to Law, they are a classification of information, namely: public information, non-public information or private information, and state secret information [25]. Regarding the classification of public information that shall be disclosed can be show from the table below.

Table 4. Normative Perspective on Public Information Classifications

Classification of public information that shall be disclosed to public	
Provided and periodically announced (Min. 1 x 6 months)	- Information related to public bodies - Activities and performance public bodies. - Financial statement. - Other information regulated by law.
Promulgated immediately	- Threatening people's lives, such as a tsunami disaster. - Disrupt public order. For example, brawl somewhere, traffic congestion.
Available at any time	- A list of all public information under its control minus the information that is excluded. - Public body's decision and its consideration. - All existing policies and supporting documents. - Project work plans, including annual expenditure plans; - Agreement between public body and third parties. - Information submitted by public officer in open meetings to public. - Employee work procedures related to public services. - Report on access to information services.

Transparency is not only focus to the content of information, but they are also tools to access that need to consider to achieved transparency goals. Most people agree that information technology through Internet, is powerful tools. According to United Nation (UN) on e-government survey, they are new trend to integrate public services through online to create effectiveness on public services. From 193 UN members, 128 provide datasets on governments spending in machine readable formats, in which infrastructure strengthening is one of their focus for creating an information system.

3.2.1. E-Government and Good Governance

Utilizing ICT platform for public service reform internationally is growing phenomenon. Then E-Government has been considered as public management to improve organizational efficiencies [26]. Coleman, 2006 argue: e-government can be defined as the combination of electronic information-based services with the reinforcement of participatory elements. However, e-government mostly misconstrued with e-governance. Both concept try to describe IT adoption for organization, whether public or private. In most developing countries, e-government lively play role for national socio-

economic development, reducing corruption and strengthening participatory government. The contribution of ICT into administration leads to embody participation democracy.

There is 4 interaction organization in good governance, which are: government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G), and government-to-employee (G2E) [27], and the strategic for good governance includes: citizen-centered, result-centered, and market-centered. In spite of the strategy and interaction, commonly they are four stages on good governance maturity, which are: presence, interaction, transaction and transformation [28].

3.3. Measurement of E-Government in Indonesia

They are two steps to assess e-government in Indonesia, first: website availability of website as a primary tool to asses e-government on public information disclosure, and second: correspond website content with public information disclosure component, namely: information announcement, information that provided, and information that served.

Table 5. Public information disclosure Measurement

Component	Indicator	Percentage
Announce	Profile	10%
	Financial Statement	30%
	Performance	15%
	Information access report	10%
	Complaints, abuse & accountability of Public Body's authority & complaint	10%
	Goods and services	15%
	Regulations	10%
Total		100%
Provide	List of public information	10%
	Early warning	5%
	Public Body's decision	5%
	Agreement with third party	10%
	Data of statistic	5%
	Correspondence	5%
	Strategic Plan	10%
	SOP of public service	15%
	Information & documentation officer (regulation & structure)	5%
	Information on the offenses committed by public agency employees	5%
	List of research	5%
	Research Result	10%
	Information on wealth report verified by Anti-Corruption Commissions	10%
Total		100%
Serve	Information Service	30%
	Reports of public information services to information commissions	30%
	Developing information systems	40%
Total		100%

From the demography of local government website, there are three categories: high, medium, and low public information disclosure. From the data collected show that 8,16% of Local Government in high level, 29,59% in medium level and 62,24% in low level. The category also counts non-availability or inaccessible website or data, that has been counted as 0, which can be occurred due to downtime factor. The result from 98 cities in Indonesia, 8 cities have high level, 29 cities have medium level and 61 cities have low level.

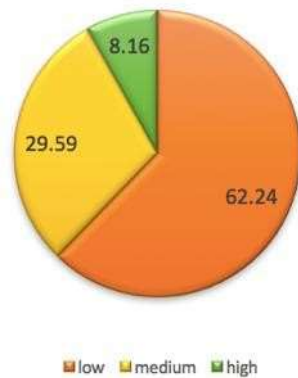


Figure 1. Percentage of E-Government

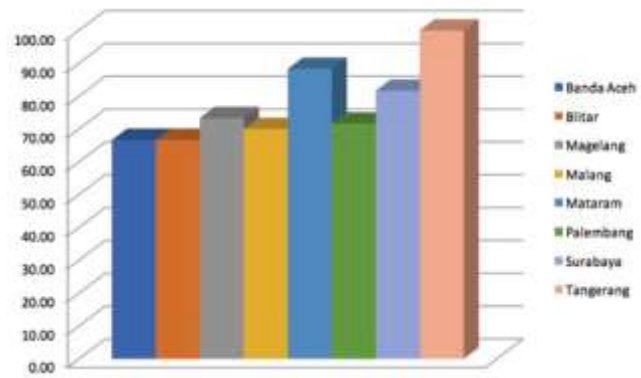


Figure 2. High Level E-Government City

They are only 8 city who runs e-government consistently, which are: Tangerang has the highest score by the scoring 100, Mataram (88,33), Surabaya (81,67), Magelang (73,33), Palembang (71,67), Malang (70,00), and Banda Aceh with Blitar (66,67). In the middle level of e-government filled by 29 local government. The highest score in the middle level is Bandung (61,67) and the lowest are Cirebon, Tasikmalaya and Padang (35,00).

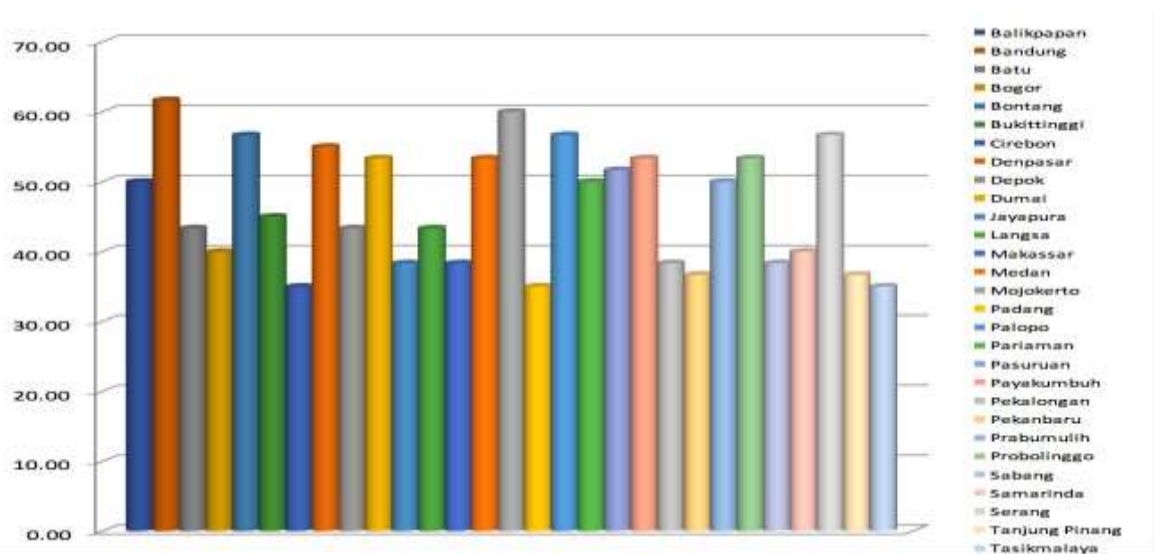


Figure 3. Medium Level E-Government City

Most of Local Government are in position in low evel. There are 61 Local Government in this level. 16 Local Government has a zero scores due to unavailable or inaccessibility website, unavailable or inaccessibility of data that possible caused by downtime factor. The 16 Local Government are Bandar Lampung, Batam, Bau-Bau, Bitung, Gorontalo, Jambi, Kendari, Lubuk Lingau, Padangsidempuan, Pagar Alam, Sawah Lunto, Sorong, Sungai Penuh, Tidore and Tual.

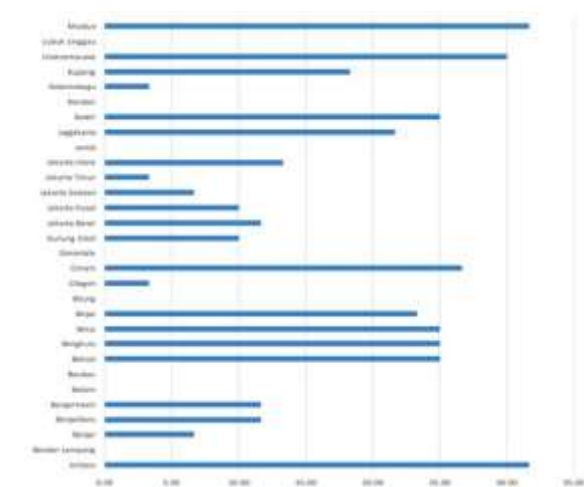


Figure 4. Data of Low Level -Part 1

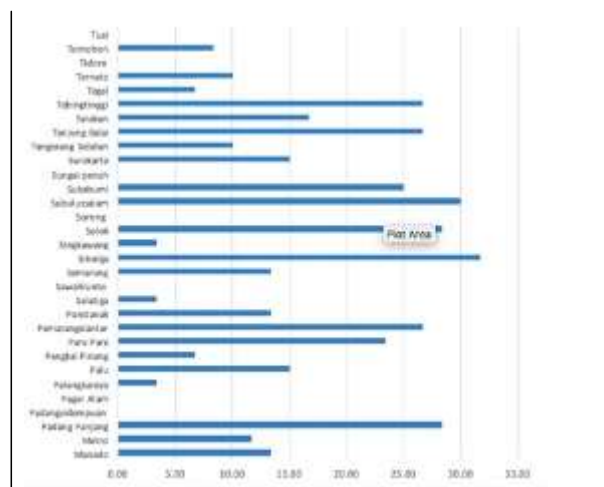


Figure 5. Data of Low Level -Part 2

They are top 10 most population city, which are: DKI Jakarta, Surabaya, Medan, Bandung, Makassar, Semarang, Palembang, Batam, Pekanbaru, and Malang. From the data above, most population city who includes smartest city in running e-government only Surabaya, Palembang, Malang, Tangerang, Mataram, Magelang, Banda Aceh and Blitar were not categorized as the biggest population city in Indonesia, but they can categorize as a smartest city in Indonesia. It is very interesting finding, because naturally, the biggest city shall categorize as a smartest city, because they must charge high burden services for its citizen. In legal effectiveness perspective of public information disclosure, the law is not very effective, because more than half city is on the lower level implementing public information.

In terms of technology infrastructure and human resources, the biggest population city is foremost, comparing with other part of Indonesian city, but in public services the data showed differently. Central government and local government itself must have full attention to solve this problem and create a big city into smart by using information technology. For big population city, public demand on services is definitely high following the population. If the government did not pay attention to transform big city through e-government, then the statement of public official who declared Indonesia smart city campaign increasing public service, is irrelevant to the service they provide. All of the reason because smart city in Indonesia was built not to the right target to enhance quality of life of the citizen. Other reason that democracy system through information and communication in municipal level cannot be seen, because municipal services on public information still ineffective on their website. Deficient information on the website certainly inhabit public services. Depart from the condition of municipal website on providing information, can be said that most of Indonesian municipal still in middle-down condition. Lastly, from legal effectiveness on public information disclosure is ineffective, because most of the municipal not obedient to law of information.

4. Conclusions

Good governance with information technology support can create a smart city. Even this two concept is different but, they are in the same goal to provide excellent service and to enhance the quality of life of the human. This noble cause was concretized by the legal norm in a series of regulations. Even though, democracy system is one of the legal perspectives that reflected in good governance. Public information disclosure is a major example to describe the condition in digital society to operate good governance by making smart city through information technology. In reality, the law of public

information disclosure is not working effective, because more than half of local government in Indonesia is in the lower position in implementing public information disclosure law.

This paper also found that Indonesian local government that categorized as a smart city is misdirect, because the smartest is not in the city that has a huge population. Under such condition, the city still operates their public services mostly on manual mode, whereas the demand for public service are high. Regarding facilities and infrastructure, big population city not shortfall comparing with less population city. That is why in the future, the government must have priority to improving and promoting big population city to become a smart city to pursue noble cause enhancing its citizen quality of life.

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