

Relational Capital of District Office in Smart City

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ABSTRACT

The purpose of this paper is to explore the activity in city government district offices that indicates creating the relational capital specifically in the implementation of Smart City. The improvement of Intellectual capital affects positively during that program. As government agent, district offices contain the biggest relational capital towards citizens. The knowledge developing process due to relationship is important to be explored. Case study is conducted as a research method. The result shows that every district office in Kota Semarang is owning and managing a website. Gunungpati district office allows the SME's product to be displayed on site. Otherwise, Ngaliyan district office built an android-based application named *Pesona Ngaliyan Hebat*.

Keywords: *District office, Relational capital, Smart city*

1. INTRODUCTION

The policy of regional autonomy that has been applied since 1999 requires local government (regions at level I and II) to be able to compete in order to improve performance in the welfare of their regions. Based on Law Number 23 of 2014, local government is defined as the implementation of government affairs by local governments and regional people's representative councils according to the principle of autonomy and duty of assistance with the broadest possible principle of autonomy in the system and principles of the Unitary State of the Republic of Indonesia as referred to in Constitution of Republic of Indonesia 1945.

In order to conduct innovative governance, the Local Government of Semarang City has implemented the Smart City concept with several cities in Indonesia such as Surabaya City, Bandung City, Sleman Regency and other Regencies/Cities. The Smart City concept aims to improve the quality of life at the urban level by using technology [1].

By applying e-government system in smart city program, the city government started to conduct knowledge development in the organization environment.

The explicit and implicit goal of many smart projects is to create IC resources. It is primarily based on three components, there are technology, ICT (information and communication technology) and knowledge [2].

Government organizations are the first to have awareness in forming intellectual capital. This awareness should begin to be formed in intellectual capital management that will have a positive impact on government performance. The Smart City strategy combined with the development of IC within the Semarang City Government organization is one manifestation to improve the performance of the mandatory functions of the Local Government.

The District Office as a form of extension of regional government for general government affairs, is directly related to the community that will serve. The district office is responsible to coordinate governance, public services, and empowerment of the Village community. The district has become the facilitator for the socialization of various programs that have been launched by the city/district government. The quality of relations with the community is the government's great asset. Thus, the development goals can be achieved.

This research will see IC from the managerial perspective, especially in the component of relational capital. IC describes collective knowledge embedded in personnel, organizations, and the organization's relation with the environment [3]. IC research on the public sector in Indonesia is still lacking. In few researches, most of them made higher education as research subjects. IC reporting conceptual frameworks for tertiary institutions with an Indonesian perspective are also rarely found. Using a framework that also came from Europe, some IC reporting conducted on

university websites caused some component items not to be found. This shows that universities have not had management of IC components [4].

The search for IC components can refer to those that have been built by public administration entities of other countries such as Spain. Spain is a country in Europe that has realized the importance of IC management. In this country, several IC model proposals for the public sector have been made, such as the SICAP Project; IC model by Caba and Sierra; IC Model by Garcia; and IC Model by Bossi

This public sector IC model developed in Spain is possible to apply because there is no IC model developed specifically in Indonesia for the public sector. By using one of the models above to reveal the RC components, this research is expected to be able to formulate the right IC components. This research will be the second step in the identification of public sector IC within the scope of local government, especially the Semarang City Government. The proposed IC component formulation is expected to assist leaders in their duties to evaluate and improve performance and achievement to relevant stakeholders.

2. LITERATURE REVIEW

2.1 Intellectual capital

The concept of Intellectual capital (IC) was first introduced by Skandia, an insurance company based in Sweden. This concept was discovered and developed by two management experts, namely Leif Edvinsson and Karl Sveiby when the company had a decline in company value. At that time, asset reporting only included tangible assets such as buildings, tools, and other tangible objects. Therefore, the two management experts tried to develop a model in which assets that were intangible could be measured, thus, they became a firm value. Until now, intellectual capital has become a theory and it is known globally to be one of the determinants in achieving a company's competitive advantage in a sustainable manner. At the beginning of the formulation of the IC model, there were only two components, such as Human Capital (HC) and Organizational Capital (OC). Over time, the development of IC theory generated to another component, namely Relational Capital (RC). Thus, IC consists of both internal (HC & OC) and external (RC) intangible resources.

Intellectual capital is currently needed, in which the knowledge economy is the basis for the creation of advanced and highly valued companies. No exception to the public sector that began to apply the principles of the private sector which eventually gave birth to the concept of New Public Management. The need for

intellectual capital is getting stronger due to the industrial revolution 4.0 that requires artificial intelligence. It can replace the role of humans in doing various jobs. IC as a source of knowledge is a big asset for companies to be able to create AI creation innovations, thus, productivity is more effective.

IC can be connected to other disciplines through two perspectives, strategy and measurement. Based on Ulum [4], in terms of strategy, IC can be used to create and use knowledge to expand firm value. In contrast, the measurement side focuses on how a new reporting mechanism can be built that can measure non-financial, qualitative information and IC items.

Human Capital (HC) is defined at an individual level as a combination of four factors, namely genetic inheritance, formal education, experience, and attitudes about life and business [5]. HC is highly important because this is where there is a source of innovation and strategic renewal that may come from discussions, wishful thinking, renewing the reengineering process, improving personal skills, and others.

Structural Capital (SC) deals with the mechanisms and structures in the organization that can assist the performance of employees in their duties for optimal intellectual performance and overall business performance. It is possible for an individual to have a high intellectual level, yet, if the organization has poor systems and procedures in exploiting the potential of that individual, the overall performance of IC can't be achieved properly.

References [5] states that an organization that has well SC absolutely has a supportive culture to allow each individual in the organization to try things, fail, then learn from failure to try again. The SC concept is what allows IC to be measured and developed in organizations [5].

References [4] stated that in Indonesia, the IC phenomenon began to develop after the emergence of PSAK NO. 19 (revised 2000) concerning intangible assets. PSAK No. 19 states that intangible assets (in the 2009 revision are called intangible assets) are non-monetary assets that can be identified and have no physical form and are owned for use in producing or delivering goods or services, leased to other parties, or for administrative purposes.

Paragraph 9 of the statement above mentions some examples of intangible assets including science and technology, design and implementation of new systems or processes, licenses, intellectual property rights, knowledge of markets and trademarks (including new brands and publicity titles). In addition, computer software, patents, copyrights, live film, customer lists, forest concessions, import quotas, franchises, supplier or customer relationships, customer loyalty, marketing rights, and market share are added.

In general, IC concepts in public and private sectors are similar, consisting of three subdomains (HC, SC, and RC). In this research, the IC concept that will be used is a concept derived from The SICAP Project. The concepts and models proposed are a form of response to the need for public administration to identify and measure intangible resources that have the potential to create value and assist to improve effectiveness and efficiency in the public sector [6].

2.2 Intellectual capital in public sector

In general, IC concepts in public and private sectors are similar, consisting of three subdomains (HC, SC, and RC). In this research, the IC concept that will be used is a concept derived from The SICAP Project. The concepts and models proposed are a form of response to the need for public administration to identify and measure intangible resources that have the potential to create value and assist to improve effectiveness and efficiency in the public sector [6].

Public human capital defined as knowledge owned by the person as an individual that advantageous in organisation missions in explicit, comes individually or socially. Public structural capital represents the set of knowledge and intangible assets owned in organisation. In public context, this capital useful to separate technological role and several aspects in administration and social that contributes to legitimate public functions. Due to prior reasons, public structural capital divided into three sub components, public organisational capital, a public social capital, and public technological capital.

As this paper’s main topic is about RC in the public sector, the proposed RC contains three elements. They are provider relationships, alliances, and media relationships. Each element consists of a few variables. Provider relationships consist of provider agreements, technological supports, ad hoc services, and provider flexibility. Alliances encompass alliance base, commitment level, and alliance returns. Media relationships consist of image and media citation. The RC itself can be defined as every external relation of organisation made.

2.3 Smart City

City is a complex system which integrates humans, businesses, transportations, communication networks, services, and utilisations. Smart city is a new thing supported by various approaches in a desired area [7]. The term smart city firstly used in 1994 [8].

Table 1. Definition of smart city

Definition	Author	Year
A city that monitors and integrates conditions of all of its critical infrastructures, including roads, bridges, tunnels, rails, subways, airports, seaports, communications, water, power, even major buildings, can better optimize its resources, plan its preventive maintenance activities, and monitor security aspects while maximizing services to its citizens	Hall	2000
The Smart city is the use of Smart Computing technologies to make the critical infrastructure components and services of a city—which include city administration, education, healthcare, public safety, real estate, transportation, and utilities—more intelligent, interconnected, and efficient	Washburn, dkk	2009
Smart City is a city in which it can combine technologies as diverse as water recycling, advanced energy grids and mobile communications in order to reduce environmental impact and to offer its citizens better lives	EU-SETIS	2012
A smart City is a city where social and technological infrastructures and solutions facilitate and accelerate sustainable economic growth. This improves the quality of life in the city for everyone	Amsterdam Smart City	2015
the use of information and communication technology to sense, analyze and integrate the key information of core systems in running cities	IBM	2010

There are alot of smart city definitions. References [2] noted the most cited definition of smart city as shown Table 1. According to the definitions on Table 1, it can be concluded that a smart city intended to create a better quality of life in the city by integrating every element and aspect using technology. The technology can simplify any complex data and information used to manage city and transform it into useful data that can be used for other importances, for the government or public

3. METHOD

Case study was chosen as a strategy used to answer research’s problem of "How is the Smart City concept

implemented in government activities in the District to form Relational Capital in the District Office?"

This method was chosen based on the performance of the Semarang City Government which focuses on developing information technology in its area to realize a Smart City. Semarang City has become an area that is successively recognized as an innovative region through the Smart Nation award initiated by the Center for Smart Nation.

The unit of analysis used was the Ngaliyan and Gunungpati District Offices. Both districts represent urban spatial structures that have their own characteristics. Primary data was taken through in-depth interviews.

4. RESULT AND DISCUSSION

Researchers found that both districts have had websites that were used to facilitate information needed by the community in each district. This website was not only owned by these two sub-districts, but all sub-districts in the Semarang City Government. The web address of Gunungpati sub-district was <http://kecgunungpati.semarangkota.go.id/>, while Ngaliyan District's was <http://kecngaliyan.semarangkota.go.id/>.

The website of each district was intended as a medium for publicizing government information, both from the Semarang City Government and the government at the district level. This was shown by the speech of the Head of the Ngaliyan Sub-district, in which this website was their commitment to be able to provide the widest possible information to the public. The web homepage in two districts showed self-portraits of the local officials or district heads.

Both districts intended to give information for people to be able to know the head of public servants within the scope of their residence.

The attention to public creativity was shown by the Gunungpati sub-district office. The sub-district office displayed the results of the local UMKM (Usaha Mikro Kecil dan Menengah-Micro, small and medium enterprises) in the office lobby. As seen in Figure 5.3, the district office used glass cupboard furniture as a display case. This showed the support of the city government and followed-up action on the progress of community thinking. This kind of relationship will increase public trust in the role of the government, especially the local sub-district office.

Another breakthrough is created by the Ngaliyan District Office that has created an android-based application called *Pesona Ngaliyan Hebat*. Until September 2020, this application has been downloaded from the PlayStore more than 500 times with a rating of

4.89. This application contained information on three subjects, namely thematic, travel, and culinary. These three subjects contain information related to stakeholders who play a role in the social and economic growth of the district. The features displayed are thematic, travel, and culinary object information features that contain Google Map-based profiles, contacts, and locations. The application development team is IT staff from Ngaliyan District.

The theme in this application is data about thematic village programs that already have their own products. There are at least 10 Thematic Villages consisting of snack, guava crystal, souvenir, ceriping, bringin berseri, Pita embroidery, Brimbang harmonious, family friendly, gadung processing and *gadung* villages. Seven of these thematic villages are thematic villages that produce processed food and handicraft products.

Tourism in this application is data about tourist objects in the Ngaliyan District area. There are ten natural and man-made tourist objects listed.

The adaptation and orientation of TI use have been rapidly developed since the inception of Smart City in 2015. Semarang city government investment to change the direction of urban management towards a Smart City has made significant progress. The use of information and communication technology in the context of government and public services has provided benefits to the government and society.

The pandemic attacking the whole world forced governments and society to change conventional mindsets towards modern ones that rely on information and communication technology. If it is related to the phenomenon and pandemic problems, the Semarang city government has taken a step further in carrying out its government activities. At least, hundreds of Wi-Fi points have been currently spread evenly in all villages in the city of Semarang. Activities that are moving massively online can already be accommodated. Internet networks and infrastructure can reach the most remote areas in the city of Semarang such as Gunungpati District. The perception of the community that the suburbs are far from the city and a touch of technology can in fact be broken through the implementation of SmartCity that has reached these areas.

Urban village communities on the outskirts of the city that still have a rural perspective will receive information disclosure that later can have a positive impact on the development of insight and knowledge. Furthermore, this insight and knowledge can be used to improve welfare through innovations. This can be seen from the rise of thematic tourism villages in the Gunungpati district. Tourism destinations in Gunungpati are the largest destinations compared to all sub-districts in Semarang City. Therefore, the Gunungpati District is

predicted by the Semarang City Government to become a Tourism District.

5. CONCLUSION

Efforts have been made to accommodate the demand for the use of information technology infrastructure due to the rapid development of technology to be accommodated by the City Government. Even distribution of Wi-Fi points throughout the city of Semarang is the starting point.

The technological breakthrough that has been made by the Ngaliyan District Office staff through the Android application provides a positive signal for the progress of the management of regional potential. Although it has not shown synergy and integration between information systems, this application shows a very friendly user experience and user interface, at least from the perspective of the researcher. This application is quite stable without any bugs in its operation.

The government can play an active role in potential marketing in order to give economic impact for the region. This achievement is a very good example to apply to other district offices. Even though the researcher does not live in the Ngaliyan District, with this application, the researcher has the confidence and optimism that public services will get better in the future. Such achievements must be improved, enhanced, and varied based on the context of the needs along with the rapid development of Semarang City.

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