Establishing and Implementing Good Practices E-Government (A Case Study: e-Government Implementation between Korea and Indonesia)

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ABSTRACT
These academic paper aims to describe the factors that lead South Korea into succeed in implementation of e-Government. At least there are factors that Indonesia government needs to learn and see South Korea as a benchmark in implementation of e-Government. First, the regulation and laws that needs to be more specific. Second, an integrated communication among governmental agencies is needed. Third, human resources ability in understanding of e-Government concept need to be develops. Fourth, the role of the leaders is the main key of successful implementation in South Korea. Those factors which are also found as a lack in implementation of e-Government in Indonesia makes South Korea can be seen as benchmark for Indonesia in adopting the implementation of e-Government practice in South Korea. The researchers use qualitative methodology in analyzing the data by using literature reviews, journals, annual report and books as a secondary data.

Keywords: South Korea E-Government, Successful Factors, South Korea as Benchmark)

I. INTRODUCTION
South Korea and Indonesia both experienced a long period of colonization. Korea several times occupied by China, and the last colonized Japan (1910-1945) (Hartono, 1987). In the other side, Indonesia being colonized by more than one country, there were Portuguese, Dutch and Japan that colonized Indonesia for approximately 350 years. Both of it born under conditions of cold war between the two countries at that time and as a result both countries face the same fundamental issue of when they have to establish nationhood, build political institutions, economic development and government administration. Until the end of the 1950s, a socio-economic and political South Korea condition is not much different from Indonesia. Since the 1980s, however, South Korea development their economic until its rising outpacing Indonesia, even when both of the countries faces the Asian Monetary Crisis condition at 1977, Korea is much faster in recovering its conditions [1]. Not only restore the economical conditions to its original positions, but also developing several areas such as its politics, government and public policy [1].

Furthermore, Information and Communication Technologies (ICT) can seen as a medicines for curing a nation from distress of corruption, mismanagement governance, inflation, monopolies, business stagnation, illiteracy and so important aspect concerns development and implementation of ICTs for Governance [2]. In this case, South Korea as a leading county in implementing good governance by using ICT [3]. Korea surprised the world with the development of IT education environment and rapidly extend the information and communication infrastructure and thus also to keep rapidity with multimedia learning environment so that Korea can implement quickly oriented education in pursuit of the constitution that has been changed [4].

Indonesia is left behind compared to others countries in ASIA [3]. Indonesia as a developing country where communication infrastructures are not established yet is effecting the number of people in obtaining the information. The availability of this infrastructure is very pronounced in areas that the process of obtaining information is still limited. Until now, the infrastructure facilities are only located in major cities in Indonesia, but not in remote towns or border areas.

However, Indonesia still needs to learn from other countries in ASIA to developing its ICT systems in the future. There are two reasons why this academic paper in this study has become important which are: First, with globalization and modernization infrastructure and technology are important, through a fine infrastructure and technology government will able to communicate in appropriate way, ICT is believed as one way that can be uses by the government in communicating and implementing good government concept especially effectiveness, efficiency and transparency value. Second, there are many consideration and potential implications of implementing and designing e-government also its impact on the citizens that need to be considered by Indonesian government to adopt. Therefore, this academic paper will discuss about what are the factors
that made South Korea successes in implementing E-Government and can it become a benchmark in implementing E-Government in Indonesia.

II. THEORETICAL FRAMEWORK
A. E-Government & E-Governance Concept

E-Government is an information technology (ICTs) that being uses by the government agencies [5]. The technologies that government use such as Wide Area Networks, the Internet, and mobile computing have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serves a better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. Less of corruption, increased transparency, greater convenience, revenue growth, or cost reductions are the resulting benefits can be (World Bank, 2015). That utilizing the networked systems efficiently to realizing a better quality in the provision of public services (Global Business Dialogue on Electronic Commerce – GBDe).

E-government divided into three specifications: (1) government to citizen (G2C/ C2G), where the citizens are able to access government information and services online; (2) government to business (G2B/ B2G), which allows online interaction between government and the private sector; and (3) government to government (G2G/ G2G), depending on various levels of governmental agencies, to deliver services and allocate responsibilities [6].

E-government which is using information technology, and especially the Internet, a one of government tools in improving the delivery of government services to citizens, businesses, and other government agencies. That also allows the citizens, businesses, and other government agencies to interact with each others.

Government is an institutional superstructure that society uses to translate politics into policies and legislation while governance is the outcome of the interaction of government, the public service, policy and programs that government made [5]. Governance implies the processes and institutions, both formal and informal that acts with authority and creates formal obligations that conducted exclusively by governments [7].

According to UNESCO, e-Governance is the using of information and communication technologies by the public sectors agencies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E- Governance is a broader concept that deals with a complex relationship and networks within government regarding the usage and application of ICTs where e-government is limited to develop (Sheridan & Riley, 2006).

B. Definitions of Implementation

According to Harsono (2002) in Hadiyanti (2017), implementation is a process for implementing policies into action policy from politics into administration. Development policies in the context of the consummation of a program. Moreover, Setiawan (2004), describe implementation as an expansion of the activities of the mutual interaction between the process of adjusting the goals and actions to achieve them as well as implementing network requires an effective bureaucracy.

Furthermore, implementation is the actions performed by individuals/officials or groups or private government aimed at achieving the objectives in the policy-making. (Van Meter and Van Horn in Wahab, 2001: 65).

III. METHODOLOGY

To analyzing the factors that bring South Korea to succeed in implementation of e-Government, this academic paper used a qualitative method. Moleong in Arizma (2012) qualitative research method is a method of research study that aims to understand the phenomenon of what is experienced by the subject of the research for example, behavior, perceptions, motivations, actions, holistically, and by means of the description in the form of words and language, in a special natural context and by utilizing a variety of natural methods. The research took place both in South Korea and Indonesia since it is a comparison study of South Korean and Indonesia in e-Government practices in 2014.

Researchers using secondary data from various sources that required to answer the research question. The data that being use in this research is a secondary data in form of books, journals, websites, and other literature that can explain about e-Government status both in South Korea and Indonesia.

IV. ANALYSIS

C. ICT in South Korea

South Korea and Indonesia both experienced a long period of colonization. Both of it born under conditions of cold war between the two countries at that time and as a result both countries face the same fundamental issue of when they have to establish nationhood, build political institutions, economic development and government administration. Until the end of the 1950s, a socio-economic and political South Korea condition is not much different from Indonesia. Since the 1980s, however, South Korea development their economic until its rising outpacing Indonesia, even when both of the countries faces the Asian Monetary Crisis condition at 1977, Korea is much faster in recovering its conditions [1]. Not only restore the economical conditions to its original positions,
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Public sectors are viewed as a rigid establishment with poor service quality and inefficient operations [9]. However, many citizens are becoming increasingly demanding on improved public services. The evolution of capabilities is influenced by the pacing of experience (Eisenhardt & Martin, 2000). If capabilities are developed too soon, people can be overwhelmed, as their ability to absorb new information is limited (Cohen & Levinthal, 1990). Based on that reasoning, forces the governments to re-think their existing modes of operation to establish new strategic initiatives and evolutionary for the public sectors’ operation based on the current situation nowadays which is fast-moving and competitive environment [6]. By analyzing the environment and evaluating existing capabilities, governments can develop their strategic [10]. Using technology as a resource and better alignment between technology and business processes would help to achieve sustainable competitive advantage for organizations for the long period [11].

Information and Communication Technologies (ICT) have been seen as a miracle medicines for curing a nation from distress of corruption, mismanagement governance, inflation, monopolies, business stagnation, illiteracy and so important aspect concerns development and implementation of ICTs for Governance [2]. In this case South Korea is leading in implementing good governance by using ICT. Korea surprised the world with the development of IT education environment and rapidly extend the information and communication infrastructure and thus also to keep rapidity with multimedia learning environment so that you can implement quickly oriented education in pursuit of the constitution that has been changed [4].

With imagination, creativity, science technology and ICT, the Ministry of Science, ICT and Future Planning (MSIP) is leading the South Korea’s industrial innovation while reviving industries of new growth engines and hope. As Korea is undergoing successful industrial development and information, MSIP is concentrating on spreading the power of industries under the new vision of creative economy, and promises to open a new possibility for tomorrow based on international cooperation with our endless passion and cheerful global spirit. By implementing 5 strategies, MSIP aim to achieve its vision which is to build a country where everyone is happy [13]. It cuts costs and delivery times for the government and simultaneously becomes a tool and balances against the government. The e-government in short is tool governance - transparency, participation, regulations and accountability [2].

Based on thus 5 strategies that are made by Ministry of Science, ICT and Future Planning (MSIP)’s Vision, The first strategy is Establishment of Creative Economy Ecosystem, in this strategy MSIP is promising Korea with creative economy ecosystem using 5 techniques; (1) to build the Republic of Korea full of creative ideas and talents by making national movement of “imagination”, cultivation of interdisciplinary science talents, cultivation of ICT professionals; (2) to translate creative ideas into commercialization and entrepreneurship by making a strong commercialization capacity of university and gov-funded research institutes, and support for commercialization of people’s ideas; (3) to make new industries and jobs and strengthen existing industries by utilizing S&T and ICT, promoting of internet-related industries, and nationwide information; (4) to support local industries to grow into industry-academia-research community by development of local specific industries, cultivation of local industries specialist, establishment to start up ecosystem infrastructure and stronger role of local community; and (5) to create, protect, utilize intellectual properties by creating high values-added IP, advancement of IP protection system and maximization of use on IP and proper compensation.

The second strategy is National Research Development & Innovation Reinforcement. In this strategy MIP aim to build an active Korea with strong innovation capacity and national research development for scientist to pursue research works by using 4 techniques; (1) to strengthen the fundamental of creative R&D with future oriented Strategic R&D by open R&D plan, R&D Investment, and improving assessment; (2) to foster promising future growth engine through smart approach by development of future core technology, i.e., stem cell, brain research, nano-materials and clean energy, space powerhouse with independent technologies, and possession of radiation medical technology & development of nuclear power technology; (3) to cultivate government funded research institutes into world’s best research institute by Re-establishment the
role of government-funded research institutes (focus on large-scale, public, original technologies, and larger proportion of project support fund in government-funded institutes major project fund), establishment of stable research environment (focus on better working environment of non-regular workers, and improvement project based system), and spread of research performance (focus in business activities of research institutes, and expansion of SME technology transfer); (4) to build research-friendly society for scientist and engineers by doing expansion of reception rate or S&T pension fund, beneficial to patriots and veterans in S&T and implementation of related laws, job creation through promotion and support for cooperative association for scientist and engineers, cultivation and support for female scientist and engineers, and operation of support center for retired scientist and engineers.

The third strategy is Promotion of SW and Content as the Core of Economy. With main idea of 1+1 amount to \( \infty \), MSIP using 4 techniques in pursuing it; (1) to foster SW, the language of the 21st century (SW education programs for elementary and middle schools/On-site SW education for universities and companies, SW-local industry convergence/SW Convergences Cluster for job creation, SW core technology development, SW research activation, and foundation for fair trades of SW); (2) to go global with Korean-style content by cultivation of Korean-style content, sharing and utilization of original source, and project for shared growth/calls for participation of content SMEs; (3) to remove regulatory barriers among media industries and nurture new convergence service by make a better regulations on technology convergence service, cutting-edge broadcasting service, and promoting of smart media and advertisement industry; (4) to build world’s best network to provide fertile soil for C-P-N-D ecosystem by on setting of nationwide Giga internet era (ensure 90% penetration rate of 1 Giga internet by 2017, promoting of the world’s 1st 10 Giga internet service/ tech development by ’13, beta service by ’14), more free WiFi zones (ensure 90% penetration rate of 1 Giga internet by 2017 from 2000 place into 10000 places), infrastructure for next-generation mobile telecommunication (development of wireless internet service up to 10 times faster than LTE/Spectrum auction for 1.8/2.0 GHz bands).

The fourth strategy is International Cooperation and Globalization. To make strong Korea with advanced research environment and competitive research partners with 3 techniques; (1) to secure leadership in the global community; (2) to develop international science business belt into a global research base for basic science by research environment that promotes creativity of global researchers, improving Future Nobel Laureates in Science Research, and effective business commercializing basic science research outcomes; (3) to expand the scale of K-move by make a strategic post for advancing into the global market (establishing responsible office for supporting venture companies and increasing the number of IT support centers aboard), Korean ICT talents in the global job markets, Global K-Startup (supporting globalization by encouraging investment).

The fifth strategy is Happier Korea with Wider Use of ICT. To achieve this strategy MSIP use 4 techniques; (1) to use ICT as tool to resolve social issues; (2) to reduce household communication cost; (3) to build a safe and convenient internet environment; and (4) to deliver happiness through post office network.

From the 5 strategies we can be concluded that MSIP in doing its work focus on the infrastructure (education and technology) to build a world’s best infrastructure. By performing a variety of ways to improve education from primary school to university, doing a variety of investments to the world of research, and provide adequate facilities and security for scientists and engineers to create a better human resources to be a professional in its own specialties will build a strengthen the process to achieve its goal. Also, putting the right person in the right place to make it efficient and effective is one of its focuses. According with the mindset of Korean who always does everything quickly set out in the strategy conducted by MSIP, which is also one factor that makes Korea so could be in the top position in the area of ICT [1].

It can be seen that South Korea government focus on several factors in the implementation of e-Government. First, South Korea government paid a lot of attention in infrastructure. Second, South Korea government allocated a lot of budget for education by providing fully funded programs for research and education programs.

According to Klievink and Janssen (2009) there are four stages models in improving public service delivery stage by stage [14]. In which a higher levels of customer orientation require higher levels of flexibility because a unique business process can be required for each request, crossing many organizations and departments. The four stages models are:

1. **Stovepipes**: Few applications, services or products are interconnected, and information is not shared.
2. **Integrated organizations**: Service delivery and IT within organizations are integrated to create a one-stop shop at the organizational level. There are hardly any inter-organizational business models.
3. **Nationwide portal**: A nationwide portal is introduced to provide access to existing products, including a digital safe. The digital safe can be used to provide government organizations with access to information when their services and products are requested.
4. **Inter-organizational integration**: Clearly defined and standardized cross-agency services are bundled and integrated, and can be requested as virtually one service via the portal.
5. Demand-driven, joined-up government: Instead of citizens or businesses having to find and request services, the portal will search for the relevant services and make recommendations. The chain is reversed and becomes demand-driven rather than supply driven.

In South Korea case nowadays, everything is already integrated. For the example if the citizen wants to make a permit they just need to visit related institution or administration through internet or homepage after that they only need to log—in that require a security code. The next step they need to do is to visit city hall or its branch (kios-k) that located in every small town in South Korea or they also able to just come to the nearest bank for submissions. In this case they are not required to fill up a personal data requirement; the citizen personal data already will automatically shows up. It is because all of the data including income and insurance already tossed in government server which makes it more effective and efficient.

This situation makes South Korea placed in the 4th stage models, Inter-organizational integration, in which focus on what customers need, rather than what individual needs, services should be leading, resulting in inter-organizational integration. This means that the organizations involved in a service-delivery chain need to work together. The various processes involved in carrying out the citizen request are integrated in an overall process or one portal.

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D. Indonesia e-Government Status

In Indonesia, e-government was officially introduced to public administration by Presidential Directive No 6/2001 on Telematics, which states that the government of Indonesia has to use telematics technology to support good governance. In Indonesia, E-government is needed for the following reasons: (1) to support the government change towards a democratic governance practices; (2) to support the application of authority balances between central and local government; (3) to facilitate communication between central and local governments; (4) to gain openness; and (5) transformation towards information society era [15].

Fig 3. E- Government Development Strategy

Source: Ministry of Communication and Information Indonesia.

According to The World Economic Forum (WEF), Indonesia currently in 98th position (South Korea is in 11th position) in case of infrastructure, for the skill of its human resources is in 63rd position (South Korea is in 39th position), 77th position for the usage of the program (South Korea is in 6th position), and the in impact that achieve by implementing of the program (e-Government/ICT) Indonesia is in 74th position (South Korea is in 5th position). Based on that data we can see there are a big distance between Indonesia condition and South Korea conditions.

In Indonesia case, until nowadays infrastructure are not spread well yet. The infrastructures were well build and established only in the big cities such as Jakarta, Surabaya, Yogyakarta, Bandung, Medan and etc. but not in the small cities either border area. Which is one of the biggest problems that need to be solve by Indonesia government if they do not want to left behind. However, we cannot forget about the fact that Indonesia is an archipelago and separated by oceans, which makes it another challenge for Indonesia government in infrastructure development. The others differences in the human resources skill, in South Korea government tries to develop citizen education in the sectors of technology. From those data proving that the human resources skill are related to usage of the programs.

According to Indrajit (2013) [16] there are 3 (tree) challenges that government meets in implementation of e-Government;

1. Relating to a way create and determine the digital access channels,
2. The involvement of other institutions outside the government i.e. private sectors in developing infrastructure and superstructure that need,
3. In formulation institutional strategy, especially with investment issues and operational costs.

Meanwhile according to Ministry of Communication and Information Indonesia (2010) there are 7 (seven) challenges that need to be considered by the government;
1. **Convergence Law**: Convergence applications and services every sector (broadcasting, telecommunication, internet) regulated by separated law and will using one licensing approach and should be integrated by develop convergence law,

2. **Infrastructure**: telecommunication infrastructure need to be upgrade to introduce convergence application and upgrading only could be done by expanding capacity of access and backbone in several cities.

3. **Content and application**: digital access channel that able to access by the citizen in easy way,

4. **Local Industries**: the involvment of local industries in development of the program,

5. **Cyber Crime**: Indonesian still facing carding case on online transaction and misuse of information to manipulate business and transaction,

6. **Free Flow Information**: focus on how to enrichment domestic cultural (way of life) with global information where pornography still a one of big issue,

7. **Children and women protection**: abuse of child and woman on internet and human transaction on internet is another issue that Indonesia government need to face.

In addition to various those poor conditions as described above, the development of e-Government in Indonesia is proof that an understanding of the potential of telecommunication particularly is still low. This poor condition happens at all levels, both in the bureaucracy and private. Utilization of e-Government to reduce the occurrence of events of fraud, criminal, until the terror that originated from identity fraud such as identity cards and passports are still not showing signs of improvement. Similarly, the various cases of smuggling and abuse of customs documents is even more prevalent and increasingly advanced modes of operation.

Therefore, the implementation of e-government that are not supported by an adequate infrastructure, a lack of understanding, vision and mission that inconsistent and not conducive regulatory rules and policies across sectors has made the achievement of the e-government program Indonesia is still in the early stages.

**E. South Korea e-Government Practice as a Benchmark for Indonesia e-Government**

Since computer skill education and Internet was first introduced in Korea in 1970, the Korean government has established an adjustment effort in education, over the time. Plans to adapt ICT in education in Korea began in July 1970, in early 1999 the country through the Framework Act provides policies to promote ICT and in July 1996 formed Enforcement Plan to adapt education in understanding the progress of time. When the Korean government established a "Cyber 21" and "White Paper" of the government is hoping that when he graduated from school students have been confident and creative in the use of new Information and Communication Technology and understood as a technology in social life (Ministry of Science, ICT and Future Planning (MSIP) of South Korea).

According to MSIP, development of infrastructure for ICT facilities in the Korean government began to use in 1997 and has been used as the Three Annual Plan for ICT Infrastructure Construction of the period 1997 - 1999. This then has changed to the Comprehensive Plan for ICT Use Elementary and Secondary School for the period 1998 - 2000 out of 1998. The policy had been changed back, and the last one is to be a Five Year Plan for Education Development for the period 1999-2003.

From thus data, it is proving that South Korea government is a few steps ahead of Indonesia. With the development of the ICT sector, South Korea improve infrastructure related information and technologies, expand the sales network via the Internet, high speed and high capacity networking systems, prepare regulations to encourage private sector participation, competition in the market, issues related to labor and also techniques privatization optimal. In 1998 the government carried out the privatization of companies such as Korea Telecom, Korea Electric Power Corporation and Korea Gas Corporation. Korean ICT development target in 2014 is to reach the level of internet connection household sector amounted to 8% or 30% of the entire population.

Key of the success of South Korea related infrastructure is how they identify the infrastructure to support the economy in accordance with the Five-year Development Plan. Besides that the role of leaders and policy makers in the implementation of the strategy that has been set and also in the allocation of resources that create coordination among ministries and also cooperation in developing infrastructure related policies. Seoul- Busan road developments is a cornerstone of industrialization in South Korea and makes a key contribution in the growth of the Korean economy. Another thing is the key to the success of Korea is the diversity of sources of funding for infrastructure that does not only come from the government budget.

When the government sets the focus of the economy is exports, the whole strategy developed is directed to support exports, and infrastructure is an important factor. One of the things that inhibit Indonesia's economic growth is the lack of infrastructure and poor infrastructure. In terms of infrastructure Indonesia ranked 98 while Korea is ranked 11 (WEF, 2015). The
transportation system that is weak and underdeveloped logistics services trade in Indonesia, some regions such as Papua have to pay two or three times the cost of the price in Jakarta for essential commodities such as cement.

Strong political leader and also the low level of corruption in Korea is also instrumental in supporting the advancement of infrastructure. Indonesia's economy is not yet stable, has a high level of corruption in almost all sectors. While there are authorized institutions related to road construction and also the maximum load for a particular road, but still can be seen from many roads with poor quality in Indonesia.

There are 3 (three) solutions that being offers by Sosiawan (2008) in responding to challenges and barriers in implementation of e-Government in Indonesia.

1. The central government needs to create a master plan and a grand strategy for e-Government as an outlined in laws or government regulations, and instructions for implementation requires technical implementation actions and the provision of means and not merely just a concepts. In addition, the central government and local governments need to consider the operating budget and adequate maintenance budget.

2. The need for education and human resources training in information technology and communication which are integrated. Human resource development in the implementation of e-Government needs serious treatment and undertaken jointly by governments, universities, and private parties. The most important is the successful implementation of e-Government lies not in the technology but relies on the human ability to manage. On the managerial side needs to make a model of e-government with a proper management, both for the central government and local government. In the existing organizational structure in departments, ministries and government bodies are non-departmental needs to be clarified part of an organization which handles the e-Government adjusted to the duties and functions of the organizational structures that already exist in order to avoid ambiguities in the management and implementation of e-government in local governance , Another thing to remember, that in the management of e-Government in the awareness of both the budget, implementation, monitoring and evaluation is essential.

3. In terms of facilities and infrastructure; it needs a solution in the form of a government policy to embrace the private sector, especially ICT provider in the form of integrated cooperation that is beneficial to both parties. Central and local government assisted private parties should make additions access and a range of telecommunications infrastructure for all people from top to bottom. Including in this case are establishes tariffs that is transparent and affordable for all.

V. CONCLUSION

Korea and Indonesia gained independence in 1945, however South Korea's infrastructure progress far beyond Indonesia. The key is a strong political leader. Regulation and bureaucracy long range strongly supports the advancement of infrastructure in Korea. So Indonesia needs a strong political leader as well as South Korea. A state leaders may change, but the sustainability of development still must go forward because of a policy that is likely to change back and forth it would take a very large cost.

Therefore, the required of single blueprint or master plan for e-Government in Indonesia in line with the direction of national development is good for long-term and short-term approach aspects of government, politics, culture, management, economics, anthropology, philosophy, religion, agriculture, industry, trade, defense and security, and so forth. For indeed implementing e-Government is identical to organize government policies to benefit society by improving the efficiency and effectiveness of public servants thoroughly.

However, it would be very hard for Indonesia to copying the implementation of e-Government practice in South Korea since there is a huge differences in many aspect such as the geographically aspect. Besides of copying Indonesia should adopt some principles that South Korea implement in the process of practicing the e-Government. By being consistence with one of the policy or the program will create a big impact. The program that always changing in the same time as the leader being change will never create any changes.

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