Preliminary Research on E-Government Development Overview: An Assessment on e-Government Capabilities in Indonesia

Aries Susanto
Department of Information Systems
Syarif Hidayatullah State Islamic University Jakarta
Ciputat, Indonesia
ariessht@ieee.org

Rizal Broer Bahaweres
Department of Informatics Engineering
Syarif Hidayatullah State Islamic University Jakarta
Ciputat, Indonesia
rizalbroer@computer.org

***Abstract*—E-Government implementation is growing widely follows dramatic enhancement in Information Technology exploitation. It also fosters on transferring information exchanges among the people who need a kind of services including advantages or benefits can be fully used and utilized. In other word, e-Government is an infrastructure applied to serve and to ease citizens or people in accessing related needs which have usually been provided by a government and become a mutual bridge in sharing information such as policies, regulations, acts and a medium place for both public and private institutions to do businesses. This paper tries to find the importance on figuring out, reviewing and assessing the e-Government performance by performing a current existing case study on e-procurement implementation in Indonesia.**

Keywords—e-Government; e-Procurement; development; assessment; evaluation; capabilities; Indonesia

I. INTRODUCTION

Nowadays, internet as a part of Information and Communication Technology (ICT) becomes crucial and significant medium for organizations to interact reciprocally with a broad range of competent stakeholders, to promote their products and services, to share information and get communication over a global community, and to evolve business transactions process [3].

The development of Information and Communication Technology (ICT) within present decade has performed a significant growth to many fields not only for which closely related to Information Technology or Information Systems, but it also penetrated into different fields including government's policies and businesses.

One of government's businesses is to serve and to ease citizens or people in accessing related needs which have usually been provided and become the mandatory tasks for government to give them diverse services such as Citizenship Identity Management, Marriage, Birth, Housing, Job, Pension and other implied processes including project tenders with public or private organizations. However, what kind of services should be provided by a government will be directly related to what citizens wish; to ease (electronically) any kind of processes: managing driver license, accessing to national health insurance, doing business, accessing to one stop services portal, etc [2].

To enable citizens to get what they need and want, government tries any possible efforts on delivering online information and kind of services through internet or other digital ways [10] in order to share and inform government policies for better governance [3], and streamline processes in order to finally shortened bureaucracies exist in many government institutions, i.e. e-Government which utilizes Information Technology web-based in processing the citizens' necessities.

E-Government becomes buzzword and popular in various aspects in Indonesia; particularly in autonomous issues requirements (decentralization issues) which e-Government used for enhancing and widening relationships between government and other parties by utilizing Information Technology usage to create new shapes [7].

Actually, e-Government in Indonesia just started after 2000 through issuing supported regulations and policies and was simultaneously followed then by implementation of e-procurement which empowers Public Key Infrastructure as a security framework in securing information, communications, transactions and so forth over related competent parties such e-procurement which connects government and business stakeholders in procurement tenders.

This paper tries to find the significance on figuring out the performance of an e-Government is not always and practically able to be overstressed. Because a format of an implementation in one region will not be always possible to apply in another areas, especially regarding to conditions or infrastructures where exist in one country like Indonesia.

Through this review by using an existing case study on e-procurement implementation in Indonesia, a simple framework is suggested to offer an appropriate strategy or at least a

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sufficient option to measure advantages of e-Government implementation and tried to be derived for analysis and placement into the related policies framework.

II. THEORETICAL FRAMEWORK

In terms of definitions and meanings of e-Government, many classified defining statements from previous literatures or things which previously cited by expertise particularly in Information Technology domains such as: Information Systems which include e-Business and its derivatives such as e-Commerce and e-Government, itself. Some literates say that e-Government still implies with e-Business and e-Commerce or a part or a sub-definition of them.

E-Government is described as the mean for governments to utilize such most innovative technologies like Information and Communication Technology, by using web-based applications, to enable citizens or businesses access more conveniently to information and services are regularly provided by government [3], which aimed to increase services in term of the capability and quality in processing people needs by providing skimmed bureaucracy.

In other part, e-Business as a broader and wider definition of e-Commerce tends to direct a shape of the usage of Information and Communication Technology-based in business transactions or exchanges which commonly conducting any commercial means context and involving buyer-seller by using electronic devices within diverse organizations, while e-Procurement is a concept used for an important government function [7] that requires the basic principles of implementing concepts of good governance: accountable, accountable, reliable [11].

The different perspectives of e-Government definitions allow an interval range in the methodologies classification through the clarity and nature of the affecting components of a related situation which bear degree of hardness or softness issues. Clarifying the matched methods for underlying characteristics of a current situation of problem existed which represents an issue that needs to be carefully and deeply figured out particularly in a situation with complex issues [3] including which model or framework is the right or suitable for e-Government evaluation due to different characteristics appear in one area.

In this regard, this paper attempts to use previous framework shapes the research theme that leads the research presented to what will be finally suggested then and assesses e-Government through e-Procurement implementation as dependent variable. A model for this research was developed in order to address the existing matters and will also be used to expand the hypotheses in this investigation as described through Figure 1 [9] and the overview section will be explained briefly through Figure 1.

A. Organization Readiness

Inadequacy of organizational readiness like implementation of e-Government has been internally shown to perform obstructive in Information Technology adoption within organizations including the lack of the availability of organizational resources that needed in related implementation or readiness of other parties such as local governments, private institutions, and other related organizations as a whole inter-related system [1] following the successful company's basic initiatives which seems to be significantly affected by its counterparts' capability in arranging related online-based business [6].

This framework includes several supporting readiness factors: authentication concepts, licit framework, interoperability matters, security principles, and open standard systems with other important readiness from supplier in which potentially manage intensity of e-procurement assimilation based on strategic and transactional foundation controlled simultaneously by the size of organizations interact and time of adoption.

III. RESEARCH MODEL AND HYPOTHESES

This model adopts previous model framework described above as proposed model for this research. The previous model assigned e-Procurement assimilation which quantifies each of technologies utilized in an e-Procurement previously penetrated from both Organizational and Supplier readiness to stipulate the step for supporting the functions on transactional procurement and its importances through competent control variables such as organization size and time range needed to control strategic and transactional intensity of e-Procurement assimilation.

Proposed model draws on an additional item in control variables: regulation, law enforcement, policy beside existing items mentioned previously in Figure 1 and posits change of e-Business context becomes e-Government, supplier readiness to infrastructure and intensity to success of e-Procurement implementation as appear in the case study taken for this research.

The present changes in proposed model can appear following the current situation which occurs in Indonesia that just implemented e-Government infrastructure through the only system: e-Procurement. Unfortunately, it just connects government (including local governments) and private business institutions. Thus, the capabilities of e-Government implementation is still far from an eligible condition which it should defragment related institutions such as academic, financial banking, suppliers, brokers electronically on an integrated online connections.

Concepts of system readiness is also in the similar condition whereas the organizational frame and infrastructure readiness frame that are crucially take part on success of e-Procurement implementation don't operate properly in case of internet connection penetration in most scattered areas in Indonesia though for applying organizational readiness variables: authentication until security and privacy have been successfully developed by empowering needed instruments.

In part of control variables, added some components: regulation, law enforcement, and accommodated policy due to poor and weak coordination, law enforcement, and supporting policy from central government to maximize the advantages of success on e-Government implementation whereas it will

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finally affect into many kind of government services to provide proper needed processes by citizens and grant a beneficial concession changes.

After all, what people want and require will consequently bear the changes in society with government's reaction to do further following the critical advantages on implementation of e-Government which are actually derived from the integration of processes underlie which come across distinct levels of government including the functions of government, itself [9].

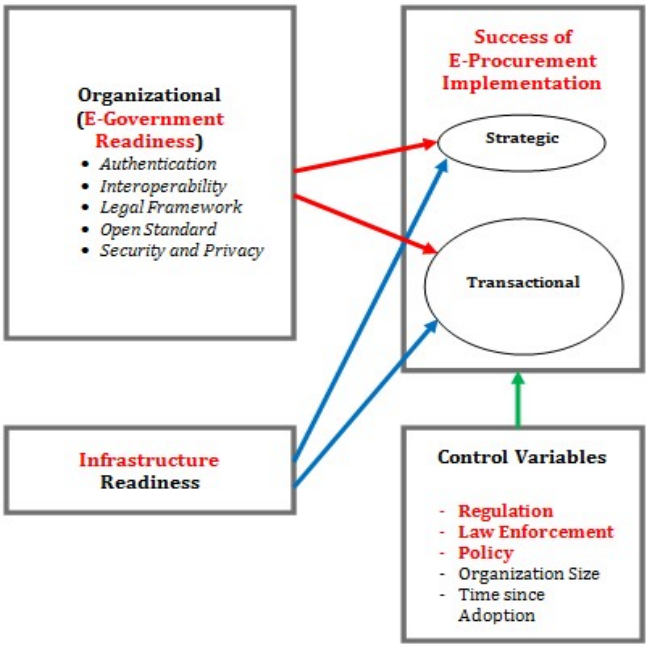

Fig.1. Conceptual Framework of e-Government Development Assessment (*Adopted from "e-Procurement Assimilation" [9]*)

Therefore, the framework will be proposed, generally based on current situation which actually exist and depend upon technical issues, organizational backgrounds and human resources, strong infrastructure, managerial feasibilities, and so forth. This study suggests that e-Government is a continuous raising system following Information Technology development and hence initiatives can be performed in e-Government should be accordingly and respectively derived and applied.

This study also figures out to the following hypotheses for the research:

1a. Higher the levels of organizational (e-Government readiness), greater will be the success of its transactional e-Procurement implementation.

1b. Higher the levels of organizational (e-Government readiness), greater will be the success of its importance on e-Procurement implementation.

2a. Higher the levels of infrastructure readiness, greater will be the success of its transactional e-Procurement implementation.

2b. Higher the levels of infrastructure readiness, greater will be the success of its importance on e-Procurement implementation

IV. METHODOLOGY

To support proposed model which previously described, this paper tries to choose the best method to approximately analyze and measure data of e-Government readiness which will be gleaned from all government institutions (local and provincial) already implemented the concepts of e-Government in Indonesia through surveys (both of electronic and non-electronic) plus related and supported internet sources from reliable websites.

In other side, the surveys will be integrated with related top managements by conducting needed interviews and the survey instruments will cover questions about advantages, disadvantages, constraints, easiness, and so forth of e-Government with e-Procurement implementation including the suggestions or any kind of critics that they will inform.

This paper also tries to investigate relationships among variables, parts, groups or organizations that have competencies within e-Government system and measure implementation of e-Procurement readiness by performing statistical analysis methods which will be relevant and appropriate for this research such partial least squares (PLS) and correlation and regression analyses to support (or reject) the hypotheses and to measure relationships among related parts to fulfill minimal requirements on measurement scales, sample sizes, and residual distributions through a relevant application tool: The PLS Graph Version 3.0 and SPSS 17 to determine the model's fitness, convergent validity (the degree to which the operation theoretically diverges from other operations), discriminant validity (the degree to which the operation theoretically converges on other operations) of the underlying constructs.

V. EXPECTED RESULTS

The expected results of this research are the theoretical model framework that has been proposed based on previously existing model and some contributions which might be considered and acquired by authorized parties especially for central government in implementing e-Government to beget the suitable, consistent, and reliable infrastructure readiness and to maintain its capabilities.

VI. CONCLUSION

This paper tries to find the importance on figuring out, evaluating and assessing the performance of an e-Government implementation by performing a current existing case study on e-procurement implementation in Indonesia

It also underlines the needs to assess the e-Government capability and its infrastructure readiness for the successful implementation of related services will be provided and derived by government to citizens not only e-Procurement .

What a government should do is efforts to keep on getting people easily use what kind of things related to governmental

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services through utilization on Information and Communication technologies, and the efforts will ease government to manage citizens' needed applications themselves.

At last, this paper proposed a theoretical model for assessing e-Government implementation that results a modified model framework which needs to be measured for its validity, reliability and consistency through such proper and appropriate tools.

VII. Future Research

Based on existing data, findings, and conditions, the future research can be addressed towards the comprehensible relationships between e-Government capabilities to promote the services and the infrastructure readiness as important and significant variables which can probably be a core and determinant factor for pre-conditions in conducting and implementing better e-Government and its derivatives system infrastructure including the relationships among the various e-Government capabilities themselves in different countries as comparison.

Future considerations which probably prominent in case of this study may be related to what kind of decisions will be taken and managed between government and citizens regarding to other sides e.g. policies: information, security, and management and so on; including data source areas analyzed for the future

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