GOOD GOVERNANCE VIA E-PROCUREMENT SYSTEM

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My beloved father H. Syafril Mahmud
and my mother Hj. Ratnawilis,
two persons who I most want to present this thesis.

The ones I love most in this life, my wife Shirley, S.Sos.,
with my beloved children,
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ABSTRACT

Public procurement in government context involved complicated processes and too budget-consuming. Inadequate and not transparency information are the main factors that cause corruption and data manipulation. However, to avoid such problems, the development of web-based e-procurement system gives priority to integrity, transparency, accountability, fairness, economy, and efficiency is needed. The e-procurement system mentioned involved five main modules such as vendor management system, announcing the acquisition of good and services, electronic access to tender documents, tender submission document, and tender selection. This e-procurement system gives privileges to all of the committee members in calculating marks to determine the winners based on their committee position. Moreover, this e-procurement system can automatically alert important events such as the due date of registration, the marking date, and the date of winner announcement. By using this e-procurement system, three stakeholders can see the benefits. First, in term of government side where reducing procurement cost, transparency, time saving, access to new supplier, and blacklist vendor. Second, in term of vendor's side where reducing cost, accessing to new buyers and increasing sales. Third, in term of public society where adequate information, and public trusts. Hopefully, good governance can be achieved by implementing this e-procurement system.

ABSTRAK

Pemerolehan umum di dalam konteks kerajaan melibatkan proses yang rumit dan menelan belanja yang besar. Maklumat yang tidak mencukupi dan telus adalah faktor utama yang mengakibatkan manipulasi data dan sogokan. Walaubagaimanapun, bagi menghindari masalah ini, pembangunan sistem *e-procurement* secara web yang memberi keutamaan terhadap aspek integriti, ketelusan, kebertanggungjawapan, keadilan, ekonomi dan kecekapan adalah amat diperlukan. Sistem *e-procurement* ini melibatkan lima modul utama seperti system pengurusan penjual, pengumuman perolehan produk dan perkhidmatan, dan pemilihan tender. Sistem ini memberi keistimewaan kepada semua ahli jawatankuasa dalam mengira markah bagi menentukan pemenang berdasarkan jawatan yang disandang. Seterusnya, sistem ini juga mampu memberi makluman mengenai acara-acara penting secara automatik seperti tarikh luput pendaftaran, tarikh pemarkahan, dan tarikh pengumuman pemenang. Dengan menggunakan system ini, tiga pemegang taruh boleh melihat faedah-faedahnya. Pertamanya, faedah kepada pihak kerajaan adalah seperti mengurangkan kos pemerolehan, meningkatkan nilai ketelusan, menjimatkan masa, capaian kepada pembekal-pembekal baru dan menyenarai hitamkan penjual. Keduanya, faedah kepada pihak penjual adalah seperti mengurangkan kos, capaian kepada pembeli-pembeli baru dan meningkatkan tahap jualan. Memberi maklumat yang mencukupi dan kepercayaan daripada masyarakat umum adalah faedah penting yang perlu disampikan. Diharapkan, pentadbiran yang baik boleh dicapai dengan menggunakan sistem *e-procurement* ini.

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CHAPTER 1

PROJECT OVERVIEW

1.1   Introduction

Procurement good and services in government of Riau Province is conducted every year. Source of budget procurement goods and services come from National General Revenue and Expenditure Budget (Anggaran Pendapatan Belanja Negara/ APBN) and Regional General Revenue and Expenditure Budget (Anggaran Pendapatan Belanja Daerah/ APBD). Procurement in government involves supplier/vendor of goods and services and must be announced to public by local news paper.

Some regulation and legislation of procurement goods and services have been issued before, but the latest one is Presidential Decree No. 80/2003 (Keputusan Presiden No. 80/2003). This Presidential Decree's focus more on procurement goods and services in government that source budget from National General Revenue and Expenditure Budget (Anggaran Pendapatan Belanja Negara/ APBN) and Regional General Revenue and Expenditure Budget (Anggaran Pendapatan Belanja Daerah/ APBD) and also non budgeter resources. This presidential decree's also encourages globalization and liberalization procurement in Indonesia. The main goal of this presidential decree's is to reduce corruption, collusion and nepotism and make fair competition in procurement.

Nowdays, government try to improve public procurement by using internet media. With internet services, the government hope to get good prices by transparent, open and fair competition. This mean that the public is also involved to control this procurement processes.

A good criteria of procurement must contains :

1. Integrity

   Integrity means that the procurement processes are honest and in compliance with the respective laws, that the best available, most suitable technical expertise is employed in a non-discriminatory manner, that fair and open competition leads to a quality product at a fair price, and that the product takes into account the legitimate aspirations and concerns of all the stakeholders.

2. Transparency

   Transparency means that laws, regulations, institutions, processes, plans and decisions are made accessible to the public at large or at least to representatives of the public so that processes and decisions can be monitored, reviewed, commented upon and influenced by the stakeholders, and decision makers can be held accountable for them.

3. Accountability

   Accountability means that governments, public institutions or corporations and individual officials, and companies or other individuals acting on behalf of companies, must be accountable for the correct and complete execution of their tasks and duties and for the decisions and actions being made in their area of responsibility. Procedures enabling full accountability should be systematic and dependable.

4. Fairness, economy and efficiency

   Contract award decisions should be fair and impartial. Public funds should not be used to provide favors to specific individuals or companies, standards and specifications must be nondiscriminatory, suppliers and contractors should be selected on the basis of their qualifications and the merit of their offers, there should be equal treatment of all in terms of deadlines, confidentiality.

Procurement should be economical. It should result in the best quality of goods and services for the price paid, or the lowest price for the acceptable, stipulated quality of goods and services, not necessarily the lowest priced goods available; and not necessarily the absolutely best quality available, but the best combination to meet the particular needs, and the published specifications.

The procurement process should be efficient. The procurement rules should reflect the value and complexity of the items to be procured. Procedures for small value purchases should be simple and fast though not at the expense of integrity, fairness or transparency, but as contract values and complexity increase, more time and more complex rules will be required to ensure that principles are observed. Decision-making for larger contracts may require complex committee and review processes. However, bureaucratic interventions should be kept to a minimum.

Public Procurement is the biggest state expenditure budget in Indonesia and also the highest level of bribery specially public work and construction sector. Lack of information about public procurement can easily hide corrupt manipulation. The problem of public procurements in Indonesia are :

    a. Mark Up Price.

    b. Double Receipt, Fake Receipt, Blank Receipt.

    c. Bad Quality within high price.

    d. Arranged Bidding.

    e. Not Transparent and Unaccountable.

    f. Lower Ethics by apparatus.

    g. Bribery.

In this study, researcher proposes a prototype electronic procurement (e-procurement) by using web base technology that give priority to integrity, transparency, accountability, fairness, economy and efficiency that is in accordance to presidential decree No. 80/ 2003.

In order to capture data and information about procurement processes, researcher choose Riau Government to be the case study, specifically department of Regional Planning and Development Agency of Riau Province (Badan Perencanaan dan Pembangunan Daerah Provinsi Riau) which is located in Pekanbaru.

The remaining part of the study is divided into three chapters. The second chapter presents the literature review; while the third presents the research methodology. The initial findings and analysis are discussed in chapter four.

1.2   The Background of the Study

Procedures of public procurement are often complex. Transparencies of the processes are limited, and manipulations are hard to detect. Acquisition goods and services processes in government are complicated, and often occurs corruption action. Marginally, procurement in government has the followings steps.

1. Need Assessment Phase/ Demand Determination.

2. Preparation Phase/ Process Design And Bid Documents Preparation.

3. Contractor Selection And Award Phase.

4. Contract Implementation Phase.

5. Final Accounting And Audit.

From each phase above, there are possible corruptions that inflict a financial loss. Possible corruptions in every phase on procurement can be identified as:

1. Need Assessment Phase/ Demand Determination. Possible Corruption are :

    a. The investment or purchase is unnecessary. Demand is induced so that a particular company can make a deal but is of little or no value to the society.

b. Goods or services that are needed are overestimated to favor a particular provider.

c. Old political favors or kickbacks are paid by including in the budget a "tagged" contract (budget for a contract with a "certain", pre arranged contractor).

d. Conflicts of interest (revolving doors) are left unmanaged and decision makers decide on the need for contracts that impact their old employers.

2. Preparation Phase/ Process Design And Bid Documents Preparation. Possible Corruption are :

a. Bidding documents or terms of reference are designed to favor a particular provider so that in fact, competition is not possible.

b. Goods or services needed are over- or underestimated to favor a particular bidder.

c. Unnecessary complexity of bidding documents or terms of reference is used to create confusion to hide corrupt behavior and make monitoring difficult.

d. Design consultants prepare a design that favors a particular bidder.

e. Grounds for direct contracting are abused.

3. Contractor Selection And Award Phase. Possible corruption are :

a. Decision makers are biased (bribes, kickbacks, or conflicts of interest are involved).

b. Selection criteria are subjective in ways that allow biases to play a role and remain unattended.

c. An advantage to a particular bidder is granted through the exchange of confidential information before bid submission or during the clarification period. Clarifications are not shared with all the bidders.

d. Confidentiality is abused and extended beyond legally protected information making monitoring and control difficult.

e. The grounds for the selection of the winner are not made public (transparency of bid evaluation).

f. Excessive (unnecessarily high) price as a result of limited or non-existent competition.

4. Contract Implementation Phase. Possible corruption are :

a. Winning bidders/contractors compensate bribes and other extra payments with poor quality, defective or different specifications than those contracted. Faulty or sub-specification work execution, requiring early repairs or expensive correction.

b. Contract renegotiation or change orders introduce substantial changes to the contract, often in small increments that can be decided by site engineer.

c. Price increases during execution through change orders reflecting changes in specifications or cost increases, facilitated often by collusion between corrupt contractor and corrupt control official.

d. Contract renegotiation is allowed or performed introducing substantial changes that render the bidding process useless.

e. Contract supervisors or monitors are not independent and willing to justify false or inexistent claims.

5. Final Accounting And Audit (When Applicable). Possible corruption are :

a. Accountants doing final accounts and Auditors are biased and willing to support false certificates

In recent years, government emphasizes to use the internet for public procurement processes. The main objective here is to have better value for money by fostering access, competition, impartiality, transparency and allowing control by civil society. By using e-procurement government, it is hoped that we can achieve the following :

a. Increased efficiency.

    b.   Enhanced transparency.

    c.   Public access.

    d.   Better risk management.

    e.   Higher levels of integrity and ethics.

    f.   Significantly better access to government procurement for Small and Medium Size Enterprises (SMEs).

    g.   Better access for non-local (provincial) bidders.

    h.   Corruption avoidance.

The proposed of this project is to develop a web base procurement or e-procurement to give priority to integrity, transparency, accountability, fairness, economy, and efficiency. Researcher also hope to reduce corruption and financial lose in procurement services and goods on government.

1.3.   Problem Statement

The problem statement from this project is :

"How to design and develop a prototype of e-procurement that is in accordance to Presidential Decree (Keputusan Presiden RI)   No. 80/2003 with web base technology".

1.4.   Objective of the project

The objective of this project are :

1. To study current procurement processes.
2. To design and develop a prototype of e-Procurement system.

1.5.   Scope of the project

Procurement have complexity processes, therefore researcher will be focus on the following area :

1. Design and develop Vendor Management System to record vendor or supplier data.
2. Announce the acquisition of good and services in government and with the entire requirement.
3. Notification, include the electronic access to tender documents. This implies that suppliers can download the tender documents from the website.
4. Tender submission document, the vendor can submit all tender documents via website.
5. Winner information will be publishing via internet. This will show who won the procurement and project specification.
6. Tender Selection, e-Procurement will be generate winner candidate each tender.

1.6.   Importance of project

By implementing internet media to conduct procurement in government, especially e-procurement services and good, Researcher hope that it can increase public trust in government for acquisition goods and services. Some benefit of using e-procurement for government, vendors/supplier and public are :

1. Government
   a. Lower transaction costs – streamlined transaction processing
   b. Transparency – greater openness on the publication and award of public contracts
   c. Access to new suppliers – internet access removes geographical barriers and provides for a more competitive marketplace
   d. Time savings – provides faster approval, ordering processes and potentially delivery.

    e. Blacklist vendor databases – Government have database that contain blacklist vendor for procurement, and band the vendor for 2 years.

2. Vendors/ Supplier

    a. Reduced costs – electronic trading enables faster processing costs, and can help to minimize errors often associated with paper based systems

    b. Access to new buyers and markets – e-procurement provides a new sales channel opening up many new opportunities for suppliers.

    c. Increased sales – with access to a wider public sector market, suppliers have the potential to increase revenue.

3. Public

    a. Adequate procurement Information – Public can monitor and control procurement processes through official website.

1.7   Summary

In this first chapter a brief introduction about the project and how the project is going to be implemented has been discussed. The problem background and statement has also been discussed in this chapter to give an introduction of the project and to explain why this project has been proposed. The objective, scope and the importance of this project have also been pointed out. Hopefully, by developing the project successfully, the objective and aim of the project can be achieved.

REFERENCES

Aberdeen Group, (2005). *Best Practices in E-Procurement.* Aberdeen Group, Inc. Boston, Massachusetts.

AGIMO, (2004). *Outlining a Process for Building the Next Stage of the Australian Government's Eprocurement Strategy.* June, Commonwealth of Australia.

Andersen, B. (1995), ``*The results of benchmarking and a benchmarking process mode*l'', PhD dissertation, Norwegian Institute of Technology, Trondheim, Norway.

Antonio Davila, Mahendra Gupta, Richard Palmer, (2003). Moving Procurement Systems To The Internet: The Adoption And Use Of E-Procurement Technology Models, *European Management Journal* Vol. 21, No. 1, Pp. 11–23, February 2003.

APCC, (2002). *Government Framework for National Cooperation on Electronic Procurement.* Australian Procurement and Construction Council.

APQC (1993), *Basics of Benchmarking, American Productivity and Quality Center.* Houston.

Barua, A., Konana, P., Whinston, A.B., Yin, F., 2001. *Driving e-Business excellence.* Sloan Management Review 43 (1), 36–44.

Bjùrn Andersen, Tom Fagerhaug, Stine Randmñl, Juèrgen Schuldmaier, Johann Prenninger, (1999). Benchmarking Supply Chain Management: Finding Best Practices. *Journal Of Business & Industrial Marketing*, Vol. 14 No. 5/6 1999, Pp. 378-389.Mcb University Press.

Daniel Knudsen, (2003). Aligning corporate strategy, procurement strategy and e-procurement tools. *International Journal of Physical Distribution & Logistics Management* Vol. 33 No. 8, 2003 pp. 720-734.

Davila, A., Gupta, M., Palmer, R., (2003). Moving procurement systems to the Internet: the adoption and use of e-Procurement technology models. *European Management Journal* 21 (1), 11–23.

Dobler, D.W., Burt, D.N., (1996). *Purchasing and supply management.* McGraw-Hill Higher Education, New York.

E. Ponce; A. Durán (2003), Characterization of the Security Implications of Alternative E-procurement Topologies. *ICCSA* 2003, LNCS 2669, pp. 114-122, 2003. Springer-Verlag Berlin Heidelberg.

Elaine Curran, Andrea Bernert, Anke Wiegand,(2004). *Electronic procurement in the public sector Factsheet on latest developments in e-procurement in the EU and*

its Member States. A joint product of the EIC Working Groups Public Procurement and Information Society.

Frank Homann, Yücel Karabulut, Marco Voss, Falk Fraikin, (2005). Security And Trust In Public E-procurement, *Technical Report* No. Tud-Cs-2005-4,07/26/2005.

Helle Zinner Henriksen, Volker Mahnke, Jens Meiland Hansen,(2004). Public eProcurement adoption: *Economic and political rationality Proceedings of the 37th Hawaii International Conference on System Sciences.* Hawaii.

Kheng, C.B., Al-Hawamdeh, S., (2002). The adoption of electronic procurement in Singapore. *Electronic Commerce Research* 2 (1–2), 61–73.

Kishor Vaidya, A.S.M. Sajeev, Junbin Gao,(2005). e-Procurement Assimilation: An Assessment of E -business Capabilities and Supplier Readiness in the Australian Public Sector. *ICEC'05*, August 15–17, 2005, Xi'an, China. ACM.

Knudsen, D., (2003). Aligning corporate strategy, procurement strategy and e-procurement tools. *International Journal of Physical Distribution & Logistics Management* 33 (8), 720–734.

Kotharia Tanvi, Clark Hub, Wesley S. Roehlc, (2006). *Adopting e-Procurement technology in a chain hotel: An exploratory case study.* Elsevier.

Kraljic, P., (1983). *Purchasing must become supply management.* Harvard Business Review, September-October, 109-117.

Lancioni, R.A., Schau, H.J., Smith, M.F., (2003). Internet impacts on supply chain management. *Industrial Marketing Management* 32 (3), 173–175.

Luitzen De Boer, Jeroen Harink, Govert Heijboer, (2001). A Model For Assessing The Impact Of Electronic Procurement Forms, *The 10th International Annual Ipsera Conference 200*1.

M.L. Emiliani, (2000). Business-to-business online auctions: key issues for purchasing process improvement. *Supply Chain Management: An International Journal* Volume 5 . Number 4 . 2000 . pp. 176±186. MCB University Press .

Miami-Dade County, (2000). *E-Procurement: Working Group Report of Findings.* Miami, Office of the Chief Information Officer, Miami-Dade County.

Patterson, K.A., Grimm, C.M., Corsi, T.M., (2003). Adopting new technologies for supply chain management. *Transportation Research Part E: Logistics and Transportation Review* 39 (2), 95–121.

Presutti Jr., W.D., (2003). Supply management and e-procurement: creating value added in the supply chain. *Industrial Marketing Management* 32 (3), 219–226.

R. Tassabehji, W.A. Taylor, R. Beach and A. Wood, (2006). Reverse e-Auctions and supplier-buyer relationships: an exploratory study, *International Journal of Operations & Production Management* Vol. 26 No. 2, 2006 pp. 166-184. Emerald Group.

Radstaak, G., Ketelaar, M.H., (1998). *Worldwide logistics: the future of supply chain services*. Holland International Distribution Council, Hague, Netherlands.

Rebecca Angeles (2006), Business-To-Business E-Procurement Corporate Initiative: A Descriptive Empirical Study. *Icec 2006 Conference*, Fredericton, Nb, Canada.

Smeltzer, L. and Ruzicka, M., (2000). *Electronic Reverse Auctions: Integrating the Tool with the Strategic-Sourcing Process*. Practix, June 2000.

Stock, J.R., Lambert, D.M., (2001). *Strategic Logistic Management*. McGraw-Hill Companies, Inc., New York.

The World Bank (2003), Electronic Government Procurement (E-Gp).*World Bank Draft Strategy Procurement Policy & Services Group*. Washington, D.C.

Thomas Puschmann, Rainer Alt,(2005). Successful use of e-procurement in supply chains. *Supply Chain Management: An International Journal* 10/2 (2005) 122–133. Emerald Group.

Tian Z., Ho. L.J., Chung J-Y, Lin K-J., Liu L., Li J. and Guttmukkala V. (2000). A study and implementation of business-to-business e-commerce with the OBI standard. *Netnomics: Economics Research and Electronic Networking* 2, (3) 293-308 Baltzer Science Publishers BV.

Transparency International (2006). *Handbook For Curbing Corruption In Public Procurement*. Transparency International.

Turban, E., King, D., Viehland, D., and Lee, J, (2006). *Electronic Commerce: A Managerial Perspective 2006*. Pearson-Prentice Hall, Upper Saddle River, NJ.

Tygar, J.D. *Atomicity in electronic commerce*. ACMMixed Media. Apr

Weele, A. van, 1988, *Inkoop in strategisch perspectief*. Samsom, Alphen ad Rijn

Yang J. and Papazoglu P. (2000). Interoperation Support for Electronic Business. *Association for Computing Machinery. Communications of the ACM*, 43 (6) pp.39-47.

Yongjie Chen, Jeff H. Rankin, (2006). A Framework for Benchmarking E-Procurement in the AEC Industry. *ICEC'06*, August 14–16, 2006, Fredericton, Canada.