Pengadaan Elektronik dan Reformasi Administrasi: Studi Kasus di Korea Selatan, Indonesia, dan India

E-Procurement and Administrative Reform: Cases of South Korea, Indonesia, and India

Wahyu Mahendra[1], Syifa Amania Afra[2]
[1,2]Department of Public Administration, Universitas Indonesia
E-mail: mahendra.wahyu@gmail.com; afraamania@gmail.com

Abstract

Public procurement is needed in all government functions and all sectors, so that government awareness of the important role of procurement is increasing in various countries. Governments in both developed and developing countries allocate significant amounts of budget to public procurement policies. On the other hand, the procurement sector is vulnerable to corruption. e-procurement is an innovation that has been initiated by various countries to reduce corruption. The implementation of e-procurement in various countries is believed to be able to reduce corruption so that it can accelerate administrative reform in each of these countries. Therefore, this article aims to compare the implementation of e-procurement in South Korea, India, and Indonesia within the framework of administrative reform. This article uses a constructive approach with a qualitative method. Data was collected with desk research on literature, policy documents, regulations, and other relevant documents. The results show that e-procurement in South Korea, India, and Indonesia is part of administrative reforms that result in efficiency, transparency and accountability, as well as accessibility and equity. The main findings of this article indicate that the factors that influence e-procurement reform in South Korea, Indonesia, and India are due to accountability and integrity, the emergence of donor support for developing countries that carry out public administration reforms, and a political economy system that is able to suppress the practice of "rents". seeker" in the procurement process. South Korea's success story in implementing KONEPS can serve as an example for Indonesia and India.

Keywords: E-Procurement, Administrative Reform, Corruption, Comparative Studies

Abstrak

Pengadaan publik diperlukan di semua fungsi pemerintahan dan semua sektor, sehingga kesadaran pemerintah akan peran penting pengadaan meningkat di berbagai negara. Baik pemerintah di negara maju maupun berkembang mengalokasikan sejumlah besar anggaran untuk kebijakan pengadaan publik. Di sisi lain, sektor pengadaan menjadi rentan terhadap korupsi. e-procurement merupakan inovasi yang telah digagas oleh berbagai negara untuk mengurangi korupsi. Penerapan e-procurement di berbagai negara dipercaya mampu mengurangi korupsi sehingga dapat mengakselerasi reformasi administrasi di masing-masing negara tersebut. Oleh karena itu, artikel ini bertujuan untuk membandingkan penerapan e-procurement di Korea Selatan, India, dan Indonesia dalam kerangka reformasi administrasi.

Mahendra & Afra: "Pengadaan Elektronik dan Reformasi Administrasi: Studi Kasus di Korea Selatan, Indonesia, dan India"

Artikel ini menggunakan pendekatan konstruktif dengan metode kualitatif. Pengumpulan data dilakukan dengan cara desk research terhadap literatur, dokumen kebijakan, peraturan, dan dokumen lain yang relevan. Penggunaan data yang ada dirangkum dan disusun untuk meningkatkan efektivitas penelitian secara keseluruhan. Hasil penelitian menunjukkan bahwa implementasi e-procurement di Korea Selatan, India, dan Indonesia merupakan bagian dari reformasi administrasi yang menghasilkan efisiensi, transparansi dan akuntabilitas, serta aksesibilitas dan pemerataan. Temuan utama artikel ini menunjukkan bahwa faktor yang memengaruhi Reformasi e-procurement di Korea Selatan, Indonesia, dan India adalah karena adanya akuntabilitas dan integritas, munculnya dukungan donor untuk negara berkembang yang melakukan reformasi administrasi publik, dan sistem ekonomi politik yang mampu menekan praktik "rent seeker" dalam proses pengadaan. Kisah sukses Korea Selatan dalam mengimplementasikan KONEPS dapat menjadi contoh bagi Indonesia dan India.

Kata kunci: Pengadaan Elektronik, Reformasi Administrasi, Korupsi, Studi Komparasi

Introduction

The government increasingly recognizes the immense power of public procurement to solve global societal challenges, improve productivity, and increase accountability. Governments in both developed and developing countries allocate significant budgets to public procurement. Djankov, Islam, and Saliola's (2016) research depict that 12.61 - 14.44% of a country's GDP was allocated for public procurement in 2015. Public procurement expenditure as a percentage of GDP increased slightly across the OECD over the last decade, from 11.8% of GDP in 2008 to 12.6% of GDP in 2019 (OECD, 2021). Additionally, the World Bank (2020) claimed that GDP shares for public procurement in developing countries were around 15-22%.

Figure 1 above shows that, in 2020, procurement spending in several countries increased significantly. Among 22 OECD-EU countries for which data is available, public procurement increased from 13.7% of GDP in 2019 to 14.9% of GDP in 2020. These increases are due to governments purchasing goods and services to support their COVID-19 responses and GDP falling because of the crisis. The data above depicts that public procurement has an important role in providing quality and open public services.

As the budget allocated for public procurement comes from taxes, governments must be accountable and efficient. However, some research reveals that public procurement is vulnerable to corruption (OECD, 2016; Transparency International, 2014; Thai, 2009, p.20; Rose-Ackerman, 1999). In the procurement process for public services, there are ever-present risks of inefficiencies, corruption, and misconduct (OECD - IPACS, 2019). Data from the

OECD confirms that in most cases, bribes were paid to obtain public procurement contracts (57%), followed by clearance of customs procedures (12%) (OECD, 2014). These facts urge governments to conduct reform, and one of the methods is the use of ICT for procurement (e-procurement).
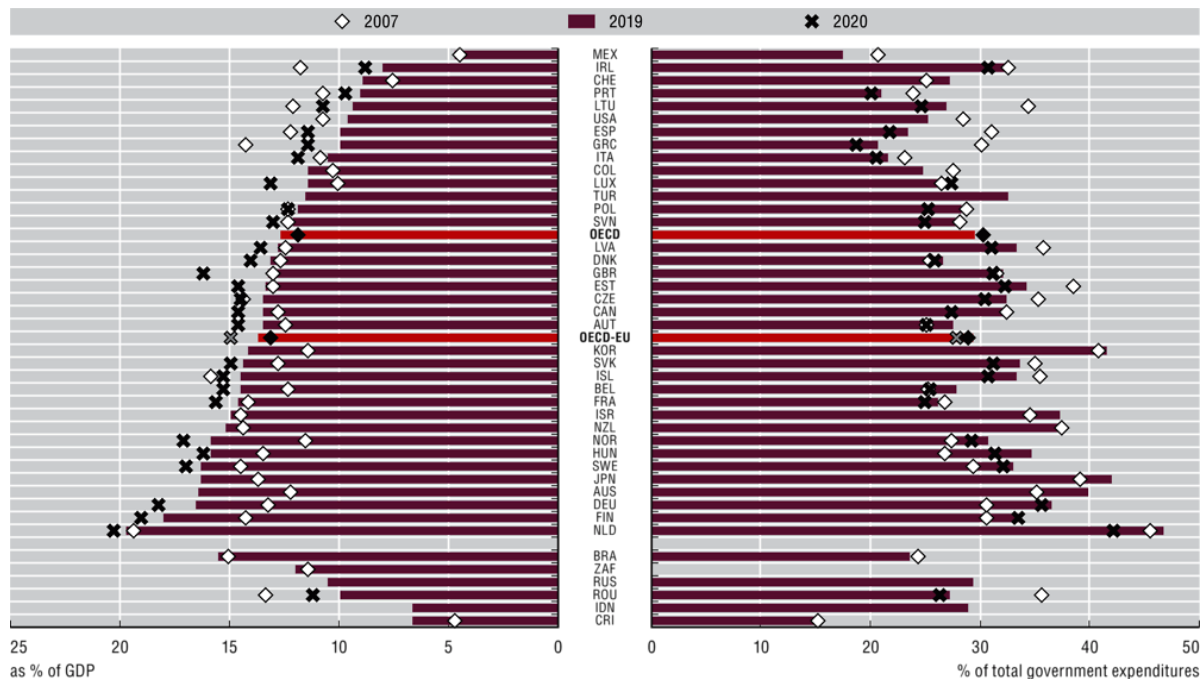

Figure 1
General Government Procurement Spending as A Percentage of GDP and Total Government
Expenditures, 2007, 2019 and 2020
Sources: OECD National Accounts Statistics (database), 2021

Some research reveals that public procurement is prone to corruption (Olken 2007, Collier et al. 2016, Lichand and Fernandes 2019, Colonnelli and Prem 2020). Globally, public procurement is a major risk area for corruption. According to UNODC's Guidebook on Anti-Corruption in Public Procurement, an average of 10-25% of a contract's value may be lost through corruption, amounting globally to hundreds of billions of dollars per year (UNODC, 2020). Approximately 8% to 25% of the value of procured goods, services, or works goes to bribes. For example, a recent EU study found that inefficiencies in public procurement amount to 18% of the overall project budgets concerned, two-thirds of which can be attributed to corruption (European Anti-Fraud Office-OLAF, 2021). Additionally, corruption in public procurement reduces the quality of public services and endangers the sustainability and safety of public projects and purchases (Transparency International, 2014, p.4; World Bank, 2016, p.2).

While governments have traditionally attempted to mitigate corruption risks in public procurement through regulation, the latest research (for example, Bosio et al. 2020) shows that laws on their own are largely ineffective at reducing the risk of bribery. Instead, more focus should be placed on procurement practices, as corruption is highly correlated. In particular, the focus of anti-corruption efforts can be directed towards some specific features of procurement practice. A system that can control and monitor the procurement process directly is needed to have minimal intervention and lobbying from related parties.

E-procurement eliminates the direct human interaction on bidding and other work and services, corruption decreases significantly, and internal efficiency increases in government departments (Ndou, 2004; Dema, 2015). Although e-procurement is not a "panacea to curb corruption" (Transparency International, 2014, p.28), the emergence of e-procurement is believed to be able to reduce corruption (OECD, 2016, p.22). Moreover, inefficiency also emerges in traditional public procurement and inefficient procedures and results in a high cost of public goods and services. (ADB, 2013, p.18).

Additionally, besides reducing corruption, ADB (2013, p.11-15) describes that e-procurement has eight main objectives. These aspects are increasing efficiency, increasing accessibility, enhancing transparency and accountability, and being equitable and inclusive. Some countries such as South Korea, Indonesia, and India have implemented e-procurement since the early 1990s - 2000s and has an interesting policy to learn (ADB, 2013).

In South Korea, a notable improvement has been made in the transparency of public procurement administration since the early 2000s through the implementation of a national e-procurement system. In 2002, Public Procurement Service (PPS), the central procurement agency of Korea, introduced a fully integrated, end-to-end e-procurement system called KONEPS. This system electronically covers the entire procurement cycle (including one-time registration, tendering, contracts, inspection, and payment), and related documents are exchanged online). Different from South Korea, government procurement in India is decentralized. At the high level, government organization is subdivided into 28 state governments, 7 union territories, 51 central government ministries and 247 central public sector enterprises (Somasundaram, 2011).

In comparison, the e-procurement system in Indonesia was initiated in 2002. The e-procurement system was named the National E-Procurement Government of Indonesia (NePGI), which was managed by the Ministry of Communication and Information and later

changed its name to the Government E-Procurement System (SePP) in 2006. Before the establishment of the LKPP (Government Goods & Services Procurement Policy Agency), the areas of West Sumatra, Gorontalo, Central Kalimantan, West Java, and East Java became pilot objects for the first application of e-procurement carried out by Bappenas (LKPP, 2016).

This paper will describe the objectives of e-procurement in the three countries above, in the field of efficiency, transparency and accountability, and accessibility and equitability. These countries are selected because they have different e-procurement systems and represent three different regions in Asia (South-eastern, Southern, and Eastern Asia) which will be further explained. On the other hand, there are several things that these countries have in common. Finally, factors affecting reform in public procurement will be examined, and lessons learned will be drawn. As an illustration, the following Table 1 compares e-procurement policies in South Korea, Indonesia, and India.

The data shows that only India uses the e-procurement system provided by the third party due to some reasons such as the lack of technical resources and risk avoidance. South Korea is leading in implementing e-procurement because it has many services and is very innovative. South Korea has won many awards, one of which was the UN's Best Practice Model for E-Procurement award in 2004. KONEPS has also become a benchmarking model for e-procurements in many developing countries, including Indonesia. Meanwhile, Indonesia began rolling out a "semi-electronic procurement" (SEP) system in 2004 in the central ministry in Jakarta and decentralized the procedure across the 33 provincial offices. This finding is an exciting thing to be compared further. Therefore, the purpose of this article is to find the differences, similarities, and lessons learned from the e-procurement policies in South Korea, India, and Indonesia in the scope of implementing administrative reforms in each country. The two main questions to be answered through this study are.

1. Do e-procurements in South Korea, Indonesia, and India meet the reform's objectives?
2. What factors affect e-procurement reform in South Korea, Indonesia, and India?

Mahendra & Afra: "Pengadaan Elektronik dan Reformasi Administrasi: Studi Kasus di Korea Selatan, Indonesia, dan India"

Table 1
Differences of E-Procurement in South Korea, Indonesia, and India

	South Korea	**Indonesia**	**India**
Type of e-Procurement	Government-owned and operated	Government-owned and operated	Public-Private Partnership
Mechanism	Combination of centralized and decentralized: Medium-Large scale: PPS Small scale: government agencies Local governments and public enterprises organize autonomous procurement	Decentralized (mainframe system)	Decentralized (autonomous system)
Authority	Public Procurement Service (PPS)	Government Procurement of Goods and Services Agency (LKPP)	National Informatics Centre (NIC, central government)
Name of Service	Korean ON-line E-Procurement Services (KONEPS)	Electronic Procurement Service (LPSE)	Central Public Procurement (CPP) Portal
Scope of Services	Comprehensive, including e-procurement portal, e-bidding system, e-contracting system, e-payment system, and online shopping mall	e-tendering, e-catalogue	e-tendering
Regulation	Korean e-Government Master Plan (Full Promotion Stage 1996-2002)	Law No. 11 Year 2008	National e-Governance Action Plan
Number of Underserved Public Organizations	60,964 (2020)	671 LPSE (2020)	254 agencies (2020) (central government)
Number of Registered Vendors	471,100 (2020)	424,028 (2020)	N/A
Amount of Tender	USD 17.641 billion (2020)	USD 72,006 billion (2020)	USD 20.07 billion (2016-2017)

Sources: (Lee, 2010; Public Procurement Services, 2008; OECD, 2016; ADB, 2013; Public Procurement Services, 2021; URAIA, 2016; LKPP, 2017; The Economic Times, 2016; Dash, 2016; LKPP, 2020)

Research Methods

This study uses a constructivist approach, which inductively compares e-procurement policies in South Korea, India, and Indonesia. Creswell & Creswell (2017) and Riccucci (2010) state that the collection method can be carried out qualitatively in the constructivism approach. In this study, the qualitative method used through literature review, an analysis of policy documents, and review of regulations include research material published in research reports and similar documents.

This type of study includes desk research using existing data. Existing data is summarized and collated to increase the overall effectiveness of the study. This study uses documents available in any public libraries, websites, data obtained from filled-in surveys, etc. Desk research is much more cost-effective than primary research. Unlike primary research, it uses already existing data, where data is collected firsthand by organizations or businesses, or they can employ a third party to collect data on their behalf. This research focuses on the implementation of the e-procurement policy in South Korea, India, and Indonesia in the period from the implementation of the policy to the present.

The design of this research begins with conducting a literature study and study of policy documents related to e-procurement policies in various countries. In Asia, South Korea, India, and Indonesia have some differences and similarities in implementing these policies. The centralization of procurement policies, providers of procurement services, and government commitments in each country are some of the differences encountered. Meanwhile, the three countries are developing countries with almost the same level of public welfare in the early 2000s. Still, the achievements of their e-procurement policies can give different results for each country nowadays.

Discussion and Result

Does E-Procurement in South Korea, Indonesia, and India Meet the Reform's Objectives?

As part of the administrative reform initiative, the implementation of e-procurement is intended to make improvements in various fields, especially in encouraging reformative procurement. In this article, three aspects of reform will be discussed:

a. Increasing Efficiency

The 2014 BIAC Economic Survey revealed that enhancing efficiency and transparency in public procurement is the main priority for public sector reform (OECD, 2016, p.7). Efficiency means reductions in transaction costs resulting from electronic workflows or automated transaction processing (ADB, 2013). World Bank estimated that cost savings from implementing e-procurement accounted for roughly 6-13% of the total budget (Transparency International, 2014, p.28).

Through the implementation of KONEPS, South Korea sets efficiency as the main priority. Through the integrated service, South Korea get benefits in term of efficiency. The details of process efficiency are following (see Figure 2).

By using integrated services, 477 documents required in public procurement are digitized. Once registered to the system, providers can participate in all procurements (OECD, 2016, p.47). In addition, an integrated service accelerates processing time, from more than 30 hours to less than 2 hours. In addition, providers are paid within 4 hours after making a request (www.pps.go.kr).

In terms of money efficiency, KONEPS saves transaction costs of around USD 8 billion per year, comprised of approximately 6.6 billion from the private sector and about 1.4 billion from the public sector (PPS, 2021). For the private sector, efficiency is gained through cost reduction for visiting public organizations and obtaining required documents (OECD, 2016, p.47). In addition, KONEPS also saves 7.8 million pages of paper documents per year (PPS, 2021). World Bank database records that in 2019, online portals like KONEPS (Korea ON-line E-Procurement System) have helped achieve upgraded levels of fairness in their respective procurement administrations (World Bank, 2021) This achievement has given KONEPS international recognition, and it has been adapted by some developing countries, such as Indonesia.

Based on data from Indonesia Corruption Watch (ICW) in 2016, 2017, 2018, and 2019 an average of 40% of corruption cases in Indonesia each year are related to the procurement of goods and services (PBJ). Even in 2019 the number reached 64% (ICW, 2021). As in much of the world, most corruption cases in Indonesia relate to public procurement. Nationally, as much as $4 billion USD is lost per year through this form of corruption alone (ES 2015; OCP 2020). Public procurement spending accounts in Indonesia for almost half of all ministerial, institutional, and local government spending. Meanwhile, the pandemic has contributed to a

significant projected increase in the Indonesian State budget, from $195 billion USD in 2020 to $196 in 2021, as well as to a rise in procurement expenditure over the same period. On the other hand, the efficiency from public procurement also increases in 2021 (UNODC, 2021). This efficiency comes from cutting transportation, accommodation, consolidation, and printing expenses (Hidayat, 2015).

Phase	Before KONEPS	After KONEPS
Bidder registration	Businesses register individually for each bidding in which they intend to participate.	Businesses are able to participate in any bidding from public entities after a one-time registration with KONEPS.
Procurement request	Procurement requests are prepared on paper and submitted to public entities.	Procurement requests are prepared through KONEPS and submitted on line.
Tender notice	Tenders were advertised in the government's official gazette and newspapers.	All tenders are advertised through the KONEPS portal.
	Businesses obtained tender information individually from each public entity, often through subscriptions to private services.	Businesses obtain all public sector tender information from KONEPS.
Bid submission and bid opening	Bids are submitted in person or via post, and opened at a designated place.	Bids are submitted on line, and opened through the contracting official's computer.
Contracting	Contracts are prepared and sealed in paper, with attached paper documents.	Contracts are prepared and processed on line (including modifications), and digitally sealed with an e-certificate.
Invoicing	Inspection requests and invoices are prepared manually and submitted on paper.	Inspection requests and invoices are prepared through KONEPS and submitted on line.

Figure 2
Comparison of Procurement Process
Source: OECD 2016

In addition, the implementation of the e-catalogue can also save local government's money. For instance, in 2013, the Government of Jakarta Province could buy 92 garbage trucks by using the e-catalogue. Using the same budget, the government could buy ten more garbage trucks than it could get if using the tender process (Republika, 2013). Additionally, e-procurement can also cut the time needed for processing tenders. Prior to e-procurement, traditional methods took more than one week to complete. However, the emergence of e-procurement has transformed the time required for a tender to around three days. In other words, e-procurement can reduce processing time up to 80% (LKPP, 2017).

By these achievements, the Indonesian government consistently supports implementing comprehensive e-procurement features in the future. The government also make efforts to simplify regulation, improve the quality of infrastructure of e-procurement, and accomplish e-catalogue systems. A large amount of money saved by efficiency is beneficial for developing countries like Indonesia, which can then allocate funds to development programs. India also

saw efficiency in implementing e-procurement, with the details as see Table 2.

The e-procurement procedure allows government contracting authorities to procure goods and services from their suppliers electronically, by transforming the manual procurement procedure into an electronic, internet-based system. Suppliers, in turn, benefit from being able to present their products on the World Wide Web. They (suppliers) can receive, manage, and process government purchase orders, and receive payment from government agencies online by using the e-procurement system. With the automation of the entire procurement cycle in e-procurement System, suppliers benefit significantly from the opportunity to reach a broader base of buyers than ever before coupled with lower operating costs, shorter turnaround time, additional revenue, and increased customer satisfaction (Nawi, et al., 2017). Vendors can also access the system without any time restrictions. Finally, this evidence shows that e-procurement supports public procurement reform in terms of efficiency. At this point, efficiency is simply described as reducing time and cost.

Table 2
Efficiency in India's e-Procurement

No.	Efficiency	Benefits
1.	Reduction in tender cycle time	From 90–135 days to 35 days, in State Government of Andhra Pradesh
2.	Saving in advertising costs	USD 0.56 million, in State Government of Andhra Pradesh
3.	Cost reduction in value of awarded contracts	12%–20% reduction reported in State Government of Andhra Pradesh

Source: ADB, 2013

Transparency and Accountability

In the context of public procurement, transparency means that regulations, processes, and decisions can be monitored by the public (Transparency International, 2014, p.12). Meanwhile, accountability means the obligation of the government to give full and fair information regarding their actions (Callahan, 2007, p.108). Rose-Ackerman (1999, p.143) also stressed that public accountability is crucial to control corruption. According to many studies, Transparency and accountability are key in public procurement, (Cocciolo, et.al., 2022). In fact, the

implementation of e-procurement in South Korea, Indonesia, and India emphasizes transparency and accountability in some ways, as discussed below.

In practice, transparency in KONEPS is proven by the availability of real-time tender information, procedures, notices, bidding details and results, and any relevant information. Additionally, the public can track the progress of each transaction, from tendering to invoicing (OECD, 2016). KONEPS closes the opportunity for corruption since people can also watch the arbitration process. The government also mandates all public organizations publish all tenders through KONEPS (PPS, 2021). In responding to OECD recommendations on accountability, South Korea conducts internal and external audits to implement KONEPS. Figure 3 shows the scope of the audit conducted by PPS.

Types of audit	Area of audit	Information audited
Ongoing audit	E-procurement system	Bid-rigging and price collusions Appropriateness and legality of electronic bidding execution Appropriateness of change in qualification criteria including notified qualification conditions, starting date of bidding, and reserve price Other general management issues of e-procurement system
Ex ante audit	Enforcement of main policies	Enforcement of policies or projects that are categorised as main policies or main projects that require progress assessment or review of the results
	Contracts for goods and services	The choice of awarding method of contracts of total amount estimated to be above USD 2 500
	Budget management	Execution of more than USD 8 500 per one of the following budget classes: • Utility + overhead costs • Maintenance cost of facility equipment • Equipment costs • Extra costs on equipment • Property acquisition costs • Budget account that is executed, executed for other purposes, carried forward or settled • The decision on choice or change of the organisation's main bank of transaction • Official meeting where more than 100 people participate (e.g. workshop)
	Goods management	Stock management change of more than USD 42 400 of book amount Sale or disposal of stock of more than USD 42 400 of book amount Loss and damage disposal
	Other	Items prescribed by the Head of the PPS to be audited *ex ante* Main terms of human resources management including appointment of an employee, rewards and disciplinary actions Management of affiliated organisations
Inspection audit	Inspection of goods	Inspection of goods (on items selected during *ex ante* audit)

Figure 3
Scope of PPS Audit Activities
Source: OECD, 2016

To conduct the audits, both PPS (internal) and BAI (external) analyze the information available in the data warehouse (OECD, 2016). The audit becomes effective and efficient since all data are stored in a data warehouse and are accessible for auditing purposes. As a result, the

integrity perception index of PPS in 2012 has improved from 6.8 to 8.52 out of 10 since the launch of KONEPS. (OECD, 2016). Similar to KONEPS, LPSE in Indonesia also ensures transparency. Using LPSE, the government publishes tender value packages, requirements, regulations, processes, evaluation criteria, and many competitors. Additionally, e-catalogue promotes transparency in terms of price and specification. Thus, people can compare the product and costs and decide the cheapest one. These advantages show the progress of e-procurement in enhancing transparency.

Compared to 11 APEC Transparency Standards for Procurement in Indonesia, LPSE meets all required standards (TII, 2011). However, LPSE does not support inclusive transparency. Only providers who join the tender have access to every single process. Meanwhile, the public does not have full access to the process.

Since transparency correlates to accountability, the availability of detailed information about public procurement on the website shows the government's initiative to disclose the previously "sensitive" or "secret" information. Through the recorded data, many agencies such as Supreme Audit Agency (BPK), Indonesian Police (Polri), and Corruption Eradication Commission (KPK), as well as the public, can conduct monitoring. In addition, the procurement committee in every procurement unit (ULP) has a responsibility to answer any complaint/appeal during the process and explain why a specific provider failed to proceed.

The central government of India mandates all departments/agencies to publish all tenders through an e-publishing service on the website. As a result, 181,868 tenders are available on the website, roughly USD 20.07 billion. Additionally, any related information such as regulations, downloadable documents, progress, and the total value of the tenders are also available on the website (MMP, 2017).

The government also requires vendors to use an e-payment system to monitor the transaction. It aims to curb corruption by minimizing "over cheques" from the vendors. In addition, the government also develops an accounting software that can generate "exception reports" and give a warning when there are frauds (OECD, 2007, p.43). This shows the government effort to be accountable in managing the funds. Finally, the findings above reveal that South Korea, Indonesia, and India are transparent and accountable in implementing e-procurement. Although corruption cases still exist, at least, governments are endeavoring to reduce the fraud.

b. Accessibility and Equitability

The centralized service provided by the e-procurement system ensures that suppliers can find the tenders easily from any device (ADB, 2013, p.13). In addition, the online publication gives opportunities to all providers to compete fairly (large companies, SOEs, and small, medium, and micro enterprises) (ADB, 2013, p.15). In South Korea, the integrated system allows providers to access all tenders after completing registration. In addition, PPS implements Multiple Award Schedules (MAS) to meet various needs of different end-users. By using this system, multiple vendors offer the same quality of goods, and the prices are listed in the Online Shopping Mall. It benefits both vendors and users; many vendors can participate in the procurement, and users have many options in purchasing goods (OECD, 2016, p.64).

In December 2014, MAS contracted 326,409 items and accounted for 88.5% (USD 53.9 million) of total goods registered in the KONEPS. Additionally, the emergence of MAS empowered Small and Medium Enterprises (SMEs) because the number accounted for 98.4% of MAS contractors (OECD, 2016, p.64). To ensure fair competition, in 2006, Korea's Fair-Trade Commission (FTC) ran BRIAS, which detected suspicious bid strategies automatically based on the daily database provided by KONEPS (OECD, 2016, p.32). As a result, in 2012, BRIAS detected 200 frauds, resulting in fines of more than USD 847 million (OECD, 2016, p.33).

The emergence of e-procurement in Indonesia also enhances accessibility for all people or vendors. The user only needs to register once to bid in all agencies or local governments in Indonesia through an integrated system. Moreover, the availability of the Vendor Management System (SIKaP) gives an option for providers to participate in all agencies/local governments or only in selected areas. By regularly checking the email, providers in large and small/medium scale enterprises have many opportunities to participate in many procurements (Kompas, 2016).

Moreover, LKPP launched the Government Goods/Services Procurement Budget (PBJP) for Fiscal Year (FY) 2020 is IDR 1,027.1 trillion or 47.8% of the entire KL and Local Government budget. The amount of the PBJP expenditure budget consists of components of goods/Services and Capital Expenditure for APBN and direct expenditure for APBD. The PBJP expenditure budget that has been announced in the Information System for the General Plan for the Procurement of Government Goods/Services (SiRUP) nationally is Rp. 863.1 trillion or 84.0% with the composition of Ministries/Institutions (KL) of Rp. 413.0 trillion and the Regional Government (local government) amounting to Rp 450.0 trillion (LKPP, 2020).

Mahendra & Afra: "Pengadaan Elektronik dan Reformasi Administrasi: Studi Kasus di Korea Selatan, Indonesia, dan India"

From the General Procurement Plan Package (RUP) that has been announced in the SiRUP, Rp 626.8 trillion or 72.6% of the total PBJP expenditure is procured through providers, while the remaining Rp 236.3 trillion or 27.4% implemented in a self-managed way. Overall, PBJP FY 2020 transactions recorded in the Electronic Procurement System (SPSE) amounted to IDR 391.6 trillion or 38.1% of the total PBJP budget. Meanwhile, if the transaction is compared to the RUP, 45.4% has been transacted (LKPP, 2020). Before e-procurement existed, the absence of transparency caused problems, such as people intimidating procurement staff and unfair competition. For example, certain providers threatened others to prevent them from submitting the tender) (Mahendra & Fatihah, 2013, p.500). The LPSE website only shows several competitors without disclosing detailed information (name, contact, etc.) to anticipate unfair competition.

In India, implementing e-procurement gives many vendors opportunities to compete. Although each state government has its system, the government ensures that the system is interoperable or interlinked. Upon registration in a unified platform, the system will validate and record the registrant's information. It aims to prevent double registration and ensure user accessibility through the entire system (both central and state government) (Asian Development Bank, 2011, p.31). As a result, the average number of competitors increased from 3 to 4.5 bidders per tenders (Asian Development Bank, 2013). To sum up, the facts above show that the emergence of e-procurement increases public or vendor accessibility. Thus, accessibility leads to a fair competition which will benefit the governments.

What Factors Affect E-Procurement Reform in South Korea, Indonesia, and India?

Following factors drive ICT-enabled public procurement reform in South Korea, Indonesia, and India.

a. Accountability and Integrity

According to World Bank (2020), around 13% of the country's GDP is allocated for procurement. Many scholars believe that public procurement can trigger economic development in a country. However, scepticism has arisen since public procurement is prone to corruption. World Bank reported that money lost from corruption accounted for roughly 8-25% of the procurement budget, and two third of 18% inefficiencies in public procurement is caused by corruption (Bosio, 2021). One form of corruption is bribery, and The OECD Foreign

Bribery Report (2014) reveals that 57% of bribery cases are carried out to win public procurement (OECD, 2016).

Corruption cases in public procurement happened due to the lack of accountability and integrity. Transparency International initiated an Integrity Pact tool to promote integrity in public procurement. By signing the document, the bidders commit to avoid bribery, and the government commits to prevent corruption and follow transparency procedures. Many countries have adopted this pact, including South Korea, Indonesia, and India (Transparency International, 2014).

In addition, South Korea uses the pact to protect whistle blowers and create an ombudsman system. Ombudsman conducts independent external monitoring to public procurement process (OECD, 2016). As aforementioned (Figure 3), South Korea also conducts internal audits (carried out by PPS) and external audits (carried out by BAI). The audit is intended to monitor any fraud in the procurement system, especially for "large project" tenders. Finally, South Korea uses e-payment, connecting the government, contractor, and bank. Thus, every party can monitor the payment flow to reduce fraud (OECD, 2007).

India uses the Integrity Pact as an essential part of the Draft National Anti-Corruption Strategy. The issuance of Directive 008/CRD/013 also refers to Integrity Pacts as Standard Operating Procedure (SOP) in any procurement contracts between the government and the bidders. Meanwhile, in Indonesia, integrity pact has been adopted LKPP as a basis of contract signing. Through Presidential Regulation No. 54 Year 2010, signing Integrity Pact is mandatory for the tenders committee (government) and the bidders.

Although corruption cases still happen, governments have the goodwill to curb corruption by ensuring integrity in e-procurement and conducting integrated monitoring through the technology (ICT). This information system can detect fraud, such as in South Korea.

b. Donor Relations

The emergence and support donors give the country in implementing public administration reform. In the implementation of e-procurement in South Korea, Indonesia, and India, some donors assist these countries as see Table 3.

The table above depicts that many donors support the implementation of e-procurement in many countries, including South Korea, Indonesia, and India. Both guidance and technical assistance given by these donors are believed to increase the capacity development of e-

procurement in South Korea, Indonesia, and India, especially to enhance integrity and accountability. Thus, donors can affect reform, but they cannot intervene in national policies.

Table 3
Donor Relations

Donors	South Korea	Indonesia	India
World Bank	Staff training	Guidance for procurement of goods funded by WB	Staff training
Asian Development Bank	Facilitating Asia Pacific Public Electronic Procurement Network		
Transparency International	Recommendation/guidance for strengthening transparency and curbing corruption in public procurement		
OECD	Recommendation/guidance in improving integrity and curbing corruption.		

Source: UNPCDC, 2011

c. Political Economy

According to Frøystad, Heggstad, & Fjeldstad (2010), political economy is the interest of multi actors in groups or society and how policy outcomes are responding to this interest. In public procurement, corruption happens due to the interest of different actors, such as the government, politicians, and bidders. Thus, how the political economy affects procurement reform will be discussed here.

KPK stated that e-procurement in Indonesia was vulnerable to corruption because 70% of corruption cases came from public procurement (Kumparan, 2020). The corruption happened due to the intervention of both executive and legislative. The phenomenon of rent seeker in Indonesia is still common. Many parliament members have been charged with corruption since they made a conspiracy in procurement. The last large-scale corruption is the markup of electronic ID cards (e-KTP) of USD 188 million carried out by many parliament members, procurement committees, and bidders.

Although South Korea's corruption perception index is better than Indonesia, it does

not mean that South Korea is free from corruption in public procurement. In 2015, 63 people were charged with corruption on defense procurement projects (Fox News, 2015). Meanwhile, in India, bribes are often exchanged in return for government contracts (Business Anti-Corruption, 2017). These cases indicate that there are a lot of "rent-seekers" in public procurement who come from legislative, executive, and society. Although the system is advanced, monitoring should be strictly and regularly conducted.

Conclusion and Lessons Learned

Table 4
Summary

Aspect	South Korea	Indonesia	India
Efficiency	Major Cost and Time Efficiency	Major Cost Efficiency, but moderate Time Efficiency	Major Cost Efficiency, but moderate Time Efficiency
Transparency and Accountability	Prominent level of transparency and accountability	Medium level of transparency and accountability	Medium level of transparency and accountability
Accessibility and Equitability	Prominent level of accessibility and equitability	Medium level of accessibility and equitability	Medium level of accessibility and equitability

Source: Researcher Analysis Results, 2022

From the Table 4, it can be inferred that the implementation of e-procurement in South Korea is better than in Indonesia and India. The implementation of KONEPS in South Korea benefits the government in terms of efficiency, transparency and accountability, and accessibility and equitability.

In conclusion, e-procurement is a part of government reform resulting in efficiency, transparency and accountability, and accessibility and equitability. To follow the success of South Korea in implementing KONEPS, Indonesia and India governments could improve efficiency (increasing the time duration), transparency and accountability (disclosing all procurement processes), and accessibility and equitability (increasing the accessibility of small

and micro enterprises to participate in procurement) in their e-procurements.

However, these countries still have corruption issues in procurement. The emergence of "rent seeker" is unavoidable and inseparable from economic activities. Thus, governments must promote accountability and act with integrity in all procurement activities to reduce rent seekers' access to corruption. Realizing that problems in procurement still occur, it needs more guidance and assistance from many donors such as World Bank and ADB to build the capacity of e-procurement.

References

Asian Development Bank. (2011) *India: Technical Assistance Consultant's Report Development.* ADB.

Asian Development Bank. (2013) *e-Government Procurement Handbook.* Philippines: ADB.

Callahan, K. (2007) *Elements of Effective Governance: Measurement, Accountability, and Participation.* Florida: Boca and Raton.

Cocciolo, S. Maro, d. V. Samaddar, Sushmita. (2022) *Transparency & Accountablility Fell Sharply for COVID-related Public Procurement.* The London School of Economics & Political Science, School of Public Policy.

Collier, P., Kirchberger, M., & Söderbom, M. (2016) The cost of road infrastructure in low-and middle-income countries. *The World bank economic review 30*(3): 522-548.

Colonnelli, E., & Prem, M. (2020) *Corruption and firms.* Available at SSRN 2931602.

Dash, G. (2016) Role of E-Procurement Technology in Government Procurement Functions (Special Emphasis is on CPP Portal). *International Journal of Science Technology and Management 5*(2): 184-192.

Djankov, S., Islam, A., & Saliola, F. (2016, November 7) *How Large Is Public Procurement in Developing Countries?* Retrieved from Peterson Institute for International Economics: https://piie.com/blogs/realtime-economic-issues-watch/how-large-public-procurement-developing-countries

Dema, J. (2015) *The Role of Electronic Procurement in Preventing Corruption* (September 28, 2015). Available at SSRN: https://ssrn.com/abstract=2666437 or http://dx.doi.org/10.2139/ssrn.2666437

European Anti-Fraud Office (OLAF). (2021) *Twenty-first report of the European Anti-Fraud Office.*

Fox News. (2015, July 15) *South Korea indicts 63 people over corruption probe on defense procurement projects.* Fox News: http://www.foxnews.com/world/2015/07/15/south-korea-indicts-63-people-over-corruption-probe-on-defense-procurement.html

Frøystad, M., Heggstad, K., & Fjeldstad, O.-H. (2010) Linking Procurement and Political Economy.

Hidayat, R. (2015) Local Government E-Procurement Practices in Indonesia: Accountability, Efficiency, and Barriers. *Journal of US-China Public Administration 12*(2): 105-114.

ICW. (2021) Satu Dekade Pengadaan Barang/Jasa di Indonesia: Analisis Tender 2011-2020 & Pemanfaatan Opentender.net oleh Publik. https://antikorupsi.org/sites/default/files/dokumen/ICW-Riset_OpenTender-2011-2020.pdf

Kompas. (2016, March 29) *Pengusaha Kecil dan Menengah Bisa Ikut Jadi Penyedia Barang/Jasa di Pemerintahan (Small and Medium Enterprises Have Opportunities as Providers in Public Procurement).* Kompas. http://biz.kompas.com/read/2016/03/29/160443028/Pengusaha.Kecil.dan.Menengah.Bisa.Ikut.Jadi.Penyedia.Barang.Jasa.di.Pemerintahan

Kumparan. (2020, August 26) *KPK: 70 Persen Kasus Korupsi Terjadi di Sektor Pengadaan Barang dan Jasa.* Kumparan. https://kumparan.com/kumparannews/kpk-70-persen-kasus-korupsi-terjadi-di-sektor-pengadaan-barang-dan-jasa-1u4lyWnNJR6

Lee, K.-M. (2010, April) Innovating Public Procurement through Korea ON-line E-Procurement System. World Bank. http://siteresources.worldbank.org/INTECACOSUPROC/Resources/776023-1271709540888/Korea.pptx.

Lichand, G., & Fernandes, G. (2019) *The dark side of the contract: do government audits reduce corruption in the presence of displacement by vendors?* University of Zurich, Switzerland, mimeo.

LKPP. (2017, April 28) *Aplikasi E-Lelang Cepat Masuk Top 99 Kompetisi Inovasi Pelayanan Publik (E-Procurement Application is Nominated as Top 99 Innovative Public Service).* https://eproc.lkpp.go.id/news/detail/293/aplikasi-e-lelang-cepat-masuk-top-99-kompetisi-inovasi-pelayanan-publik

LKPP. (2017, June 14) *Smart Report.* LKPP. http://report-lpse.lkpp.go.id/v2/public/efisiensi#

LKPP. (2020) *Profil Pengadaan Barang/Jasa pemerintah.* http://www.lkpp.go.id/v3/files/attachments/5_YsVRQCyczhyPeDjvxKaNjaJULQkTCwTw.pdf

Mahendra, W., & Fatihah, C. Y. (2013) *The Advantages of LPSE in Enhancing Transparency and Accountability on Public Procurement in Indonesia.* The Role of Educators & Students in Building INTEGRITY (pp. 494-510). Jakarta: Tiri-Integrity Action.

Mohd Nawi, M. N., Deraman, R., Bamgbade, J. A., Zulhumadi, F., & Mehdi Riazi, S. R. (2017) *E-procurement in Malaysian construction industry: benefits and challenges in implementation. International Journal of Supply Chain Management (IJSCM) 6*(1): 209-213.

Ndou, V. (2004) E–Government for developing countries: opportunities and challenges. *The electronic journal of information systems in developing countries 18*(1): 1-24.

OECD. (2007) *Integrity in Public Procurement: Good Practice from A to Z.* Paris: OECD.

OECD. (2014) *OECD Foreign Bribery Report; An Analysis of The Crime of Bribery of Foreign Public Officials.* OECD Publishing. http://dx.doi.org/10.1787/9789264226616-en

OECD. (2016) *Preventing Corruption in Public Procurement.* OECD.

OECD. (2016) *The Korean Public Procurement Service: Innovating for Effectiveness.* OECD.

OECD-IPACS. (2019) *Mitigating Corruption Risks in the Procurement.* https://www.oecd.org/gov/public-procurement/mitigating-corruption-risks-procurement-sporting-events-IPACS.pdf

OECD. (2021) *Size of Public Procurement.* https://www.oecd-ilibrary.org/sites/18dc0c2d-en/index.html?itemId=/content/component/18dc0c2d-en

Olken, B. A. (2007) Monitoring corruption: evidence from a field experiment in Indonesia. Journal of political Economy, 115(2), 200-249.

Public Procurement Service. (2021, December 14) *What is integrated Korea ON-line E-Procurement System (KONEPS)?* Public Procurement Service. https://www.pps.go.kr/eng/jsp/koneps/overview.eng

Public Procurement Services. (2008) *E-Procurement White Book.* Daejeon: Public Procurement Services.

Republika. (2013, December 7) *Pakai E-Catalog, DKI Terbukti Hemat Anggaran (Using e-Catalogue, DKI Jakarta Saves the Budget).* Republika. http://nasional.republika.co.id/berita/nasional/jabodetabek-nasional/13/12/07/mxfaem-pakai-ecatalog-dki-terbukti-hemat-anggaran

Rose-Ackerman, S. (1999) *Corruption and Government: Causes, Consequences, and Reform.* Cambridge: Cambridge University Press.

Somasundaram, R. (2011) *INDIA: Case study on e-Government Procurement Development.* Asian Development Bank.

Thai, K. V. (2009) *International Public Procurement: Concepts and Practices. In K. V. Thai, International Handbook of Public Procurement (pp. 1-24).* Boca Raton: Taylor & Francis Group.

The Economic Times. (2016, January 26) *E-tender must from April 1 for govt purchases above Rs 2 lakh.* The Economic Times. http://economictimes.indiatimes.com/news/economy/policy/e-tender-must-from-april-1-for-govt-purchases-above-rs-2-lakh/articleshow/50727827.cms

Transparency International. (2014). *Curbing Corruption in Public Procurement: A Practical Guide.* Berlin: Transparency International.

UNPCDC. (2011) *Strengthening Country Procurement Systems: Results and Opportunities.* Busan: UNPCDC.

UNDP. (2021) *Fixing public procurement systems with transparency, accountability, and integrity mechanisms.* https://www1.undp.org/content/fairbiz/en/home/blog/fixing-public-procurement-systems-with-transparency--accountabil.html

URAIA. (2016) *Chapter 1: Digital Government.* Paris: URAIA.

World Bank. (2016) *Benchmarking Public Procurement 2016: Assessing Public Procurement Systems in 77 Economies.* Washington DC: World Bank.