A STUDY OF THE ROLE OF PUBLIC PROCUREMENT – CAN PUBLIC PROCUREMENT MAKE SOCIETY BETTER?

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Abstract

The size of public procurement is quite considerable. It accounts for a significant proportion of the demand for goods and services in the nation and is increasingly considered as an attractive instrument for developing society and nation. As a matter of fact, public procurement has come to play a major role in making society better, and thus, there has been much research in public purchasing and its efficient operations. However, while many people have discussed the effects of public procurement in many related issues and areas, little research has been done on the broad spectrum of the role of public purchasing. Based on previous literature reviews, extensive case analysis, and interviews with Korean public procurement officials, a new model is developed to describe the entire aspect of the role of public procurement.

1. The role of public procurement

The procurement is defined as acquiring resources from outside suppliers. In this sense, procurement activities are very critical to all organizational units from households to firms, organizations, and the government. From the functional viewpoint, procurement is an indispensable activity and its successful achievement is essential to any organization.

In the private sector, procurement is considered as a profit center to maximize the firm's profit in saving material cost. However, there is a major distinction in public procurement as it draws its funds from tax revenue. Hence, unlike procurement in the private sector, governmental procurement should reflect public concerns as well as efficiency. Nevertheless, both are quite similar in many ways such as cost savings, quality assurance, supplier relationship, procurement ethics, supply market analysis, green procurement and so on.

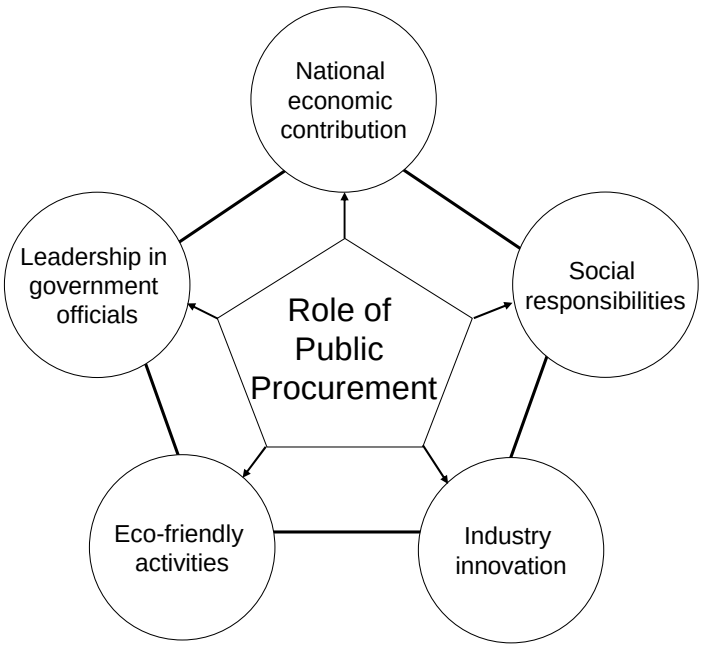
The size of the public procurement is quite considerable. In Korea, public authorities spend approximately 10 % of the Korean GDP. Thus, public procurement accounts for a significant portion of

the overall demand for goods and services and is increasingly seen as an attractive and feasible instrument for developing society and nation. Therefore, a simple policy of public procurement can make a profound impact on a nation or industry. As a matter of fact, public procurement has come to play a major role in enhancing the quality level of public and private sectors, and there has been much research into public purchasing.

Thai (2008), Monczka et al. (2008) and Burt et al. (2009) have explained the general aspect and characteristics of public procurement in their works. Cohen et al. (2002), Edler and Georghiou (2007) discussed the influence of public procurement on industrial R&D and Carter (2000) addressed socially responsible purchasing practices, and Rose-Ackerman (1999) and Soreide (2002) investigated the ethical issues of procurement. Also, Bhatnagar, (2003) mentioned e-Government and Fox et al. (2002) discussed social responsibility, and Beste (2008) discussed green purchasing policy.

While many people have discussed the effects of public purchasing in many related issues and areas, little research has been done on the broad spectrum of the role of public purchasing. Based on the previous literature reviews, extensive case analysis and interviews with Koran public procurement officials, a new model has been developed to describe the whole aspect of the role of public procurement. In this paper, this role can be classified into five categories – (i) The national economic contribution, (ii) The leadership in government officials, (iii) Social responsibilities, (iv) Eco-friendly activities, and (v) Industry innovation, which can be seen in <Table 1>. The complete research for each area will be discussed in the chapters following.

< Table 1: The role of public procurement >



2. National economic contribution

Public procurement can make a major impact on national economy. On average, total public expenditures by central and local governments (including consumption and investment expenditures) are estimated to account for about 10% of GDP in Korea. In addition, in some sectors, government procurement tends to be one of the most important source of sales (e.g. defense industry, health industry or research-related industries, construction, energy, transport equipment).

< Table 2: Korean GDP and Public Procurement Expenditures >

(Unit: hundred million Won)

Year	2004	2005	2006	2007	2008
GDP	8,268,927	8,652,409	9,087,438	9,750,130	10,239,377
P. P.	767,633	832,077	837,586	920,352	1,009,364
Ratio	9.3%	9.6%	9.2%	9.4%	9.9%

* P. P. = Public Procurement Expenditures
* Ratio = P. P. / GDP

Thus, if we can save a small portion of the public procurement expenditure, the government can relocate their resource to other valuable areas. If the Korean Public Procurement Service (PPS) can save 10% of its budget in 2008, one trillion Korean Won could be relocated to other areas such as the social welfare sector which would significantly improve Korean society.

How can this expenditure be saved? Even in private industry, cost savings and reductions of procurement materials and services have been considered to be one of the most important procurement activities to make a company successful and this can apply to public procurement as well. There are many ways and methods of affecting this, but first of all, public procurement officials have to understand cost structure, cost behavior and the supply market to maximize this opportunity. Traditionally, value engineering, value analysis, market forecasting, consolidation of requirements, standardization of materials, buying consortium, power negotiation, competitive bidding, long-term contract and supply base optimization are the most famous methods to reduce the cost of procurement. Public procurement continuously tries to find better ways of achieving these ends.

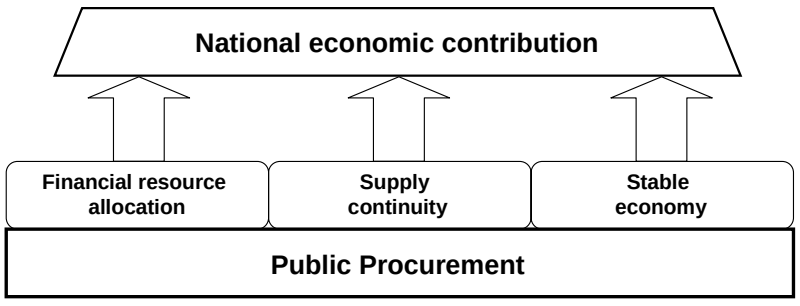
Since Korea has very limited natural resource, it is essential to provide raw materials without disruptions or unexpected price increases. The nature of the raw material market is highly volatile. Public procurement has a leading role in managing it. Because of the uncertainties in this market in the world, public procurement should take proactive actions to ensure continuity of supply. For example, an oil crisis or a shortage of certain raw materials can cause a disruption

of production which is bad for the national economy. Furthermore, since the economy is growing, the consumption of raw materials is growing larger. For example, the consumption of aluminum in the 1980s was around 100,000 tons, but 1,000,000 tons were used in 2009, which makes Korea the fifth largest nation to use aluminum as a raw material. Therefore, risk management of raw material shortage or scarcity becomes extremely important to the national economy. The Korean PPS recognizes, evaluates and tries to measure the risks involved in raw material uncertainty and takes early action to prevent them as best as they can. If it is necessary, they can purchase certain materials and reserves against rainy days. They can also try multiple sourcing strategies to diversify the risk. Nevertheless, if a risky event is unpredictable, they prepare a contingency plan to handle these situations. One step further, the Korean PPS is now trying to establish a raw material buying consortium. Since Korea, Japan and China are the very big customers in raw material markets in the world, they can achieve a great deal of cost savings or acquire greater buying power if they cooperate.

At the same time, The Korean PPS has carried out the government stockpiling operation for the purposes of stabilizing prices and helping to maintain a balanced supply and demand. The stockpiling operation covers materials with high foreign dependency as well as high relevance to the industry. Korea is generally reported to be the 4th or 5th biggest consumer of non-ferrous metals in the world, following China, the US and Japan. In consideration of the continuous rise of international commodity prices, PPS has released stockpile materials in an effort to balance domestic supply and demand, and provide an environment whereby domestic firms may steadily continue their manufacturing activities. In particular, in the matter of assisting domestic businesses with their stable raw material procurement while reducing risks in government stockpiling, PPS has introduced the Joint Purchase Service for raw materials. PPS's Joint Purchase Service is an arrangement between PPS and small and medium size business(SMB) manufacturers whereby PPS compiles related purchase requests from SMB, determines the optimal purchase timing, and purchases raw materials on their behalf while retaining the advantage of large volume purchasing.

To characterize the public procurement for national economic contribution, the diagram is depicted in the <Table 3>.

< Table 3: The role of public procurement for national economy>



3. Leadership in government officials

The governmental system is very complicated and not easy to innovate for many reasons. In this context, The Korean PPS is trying to show the excellence of operating the whole system in more innovative ways. PPS identifies how to maximize the efficiencies of government's budget execution, how to develop electronic and transparent work process system and how to find more innovative ways to operate the organizations. This is called "leadership in government organization for maximum efficiency and innovation."

A budget is a financial plan that covers a specified period. It identifies the financial resources allocated to products, services, departments or divisions of an organization. Budgets are also tools for allocating funds to accomplish the objectives of the organization. Every public organization has its own budget systems and efficient budget management is a very important issue for organization.

In this sense, The Korean PPS maximizes the efficiency of the government's budget execution and management by minimizing procurement costs through centralized procurement. In this context, PPS facilitates the procurement of commonly used supplies by establishing annual unit price contracts for products in continuous demand. PPS assists public organizations with their efficient budget execution based on its accumulated expertise. PPS raises government's budget efficiency through reviewing and adjusting the total construction cost of large scale national projects.

PPS's initiative was aimed not only at saving the procurement expenditure itself, but also at setting a budget saving pattern for all government agencies and promoting best practices. This was initialized so that the budget saved by each government agency may be reallocated, which in turn could be used for stimulating the national economy and reinforcing the government's policy initiatives and economic stimulus. Towards this purpose, PPS has monitored the implementation process and results on a weekly basis and continuously explored possible measures to increase budget savings. At the same time, PPS has improved its quality assurance to ensure that the quality of goods and construction works is not compromised as a result of the reduced budget. It is quite important that PPS's budget saving initiative has not focused on constraining the contract award prices. Instead, PPS focused on enhancing the efficiency of the government's budget execution by improving procurement processes and practices, while maintaining the quality of public administration and services. As a result of concentrating its capacity and resources in such policy implementation and service innovations, PPS has achieved the annual budget saving of 5.14 trillion which noted an 8.2% excess of the target saving in 2008.

Governmental organizations want to improve their efficiency. However, at the same time, since organizations are public, they are very concerned about transparency and fairness. Sometimes, there is a conflict between efficiency and transparency. For example, if public procurement organizations want to increase their operating efficiency, they can give the full authority and freedom to a buyer if that person is an expert in that area, so a decision can be made as to whatever is bought effective, and it will be fast. That makes the procurement process much quicker. But in this case, if the buyer is not ethical, the opportunity can be utilized for personal interest, which creates an ethical problem. If this problem is to be prevented, it requires long steps, rules and policies to check and audit the procurement processes, which make procurement decisions and lead times longer and less efficient.

Can both efficiency and transparency be had at the same time? In consideration of this, the Korean PPS has introduced new on-line procurement systems to solve this dilemma. PPS's KONEPS (Korean Online e-Procurement Systems) channels the public organizations' demands and streamlines the procurement process, which allows budget savings, reduces the scale of administrative human resources and ultimately contributes to the creation of a scaled-down yet more efficient government. At the same time, PPS pioneers the ways of enhancing transparency in public procurement. Public procurement requires a high level of work ethics, as it operates amidst the commercial interests of numerous bidding participants. Through the implementation of KONEPS, PPS has digitalized the entire procurement process from purchase request through to payment and removed unnecessary direct interpersonal contacts between suppliers and contracting officials. PPS has also made improvements in its work procedures and policies to enhance transparency, such as the Integrity Pact Policy and the real-time release of procurement related information. With the advent of e-Procurement, PPS dedicates itself to disseminating transparent procurement procedures, policies and best practices among public organizations, and its effect is continuously growing.

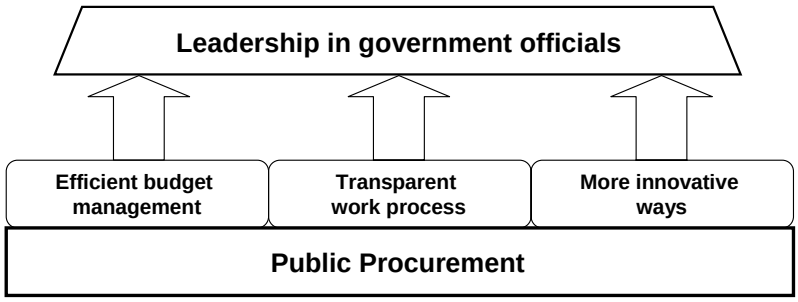
Public procurement remains mostly grounded in a view of 'best value for money' that only looks at the bottom line price. Furthermore, with the recent economic downturn, the pressure to purchase goods at the lowest possible cost has increased and thus the possibilities of thinking more in the use of 'long term and strategic view' might have declined. However, despite this pressure, there is reason to believe that more innovative approaches to consider total cost of procurement or life cycle cost when the decision is made. The total cost is not the simple purchasing cost, but it can include all cost

factors during the whole life time. This approach is called “total cost of ownership (TCO)”. The TCO method is a technique which can be used to make sure that all associated costs over a given time period are considered when you are acquiring an asset. TCO can be described as all costs of owning and operating an asset over time. TCO does not only reflect the costs of purchase. It also includes all other aspects in the further use and maintenance of the asset. TCO differs in two important ways from most models that attempt to look at the cost of doing business with a supplier. First, TCO considers a broader spectrum of acquisition costs than do most cost of ownership system. Second, TCO attempts to look at life cycle cost, which considers costs associated with using a given item from a given supplier during entire life of the item.

The lesson of TCO shows more innovative ways of doing things in consideration of both short term and long term effects. TCO can help better decision making, understanding suppliers, performance measurement, communication and continuous improvement. For those reasons, there is a growing tendency of public procurement to consider TCO if they review procurement decisions. As a matter of fact, the TCO approach can change the behavior of the governmental organizations toward long-term concerns and strategic success.

To characterize the public procurement for leadership in government officials, the diagram is depicted in the <Table 4>.

< Table 4: The role of public procurement for government leader>



4. Social responsibilities

As a part of managing their supply chain and public operations, organizations should not only comply with applicable environmental and safety standards, but also develop and follow code of conduct that address legal and ethical standards in relation to suppliers, communities and government entities. As the firms go further, they are willing to take the leadership to make the society better. Carrol (1979) addressed the hierarchy of social responsibility model.

< Table 5: The hierarchy of corporate social responsibility >

This model can also apply to purchasing area. Refraining from use of child labor, excessive work hours, paying less than a living wage, gender inequity and any other forms of exploitation are facets of social responsibility. Furthermore, social responsibility has to do with the human aspects of operation. How well does a firm or government entity treat its suppliers? Do they earn living wages? Is a firm monitoring its suppliers to be assured that none uses child labor, or mistreats employees by requiring overlong workdays or minimizing time off? Do suppliers earn a living wage in their home locations? Are adequate personal safety safeguards in place, and is appropriate medical care available? These and other questions comprise the core of socially responsible procurement management.

Public procurement can also be an outstanding tool to promote social responsibility (SR), as governments operate as both regulators of and participants in the market. There are many ways in which public procurement can play a major role in stimulating SR and corporate accountability. The public procurement takes a leading role in linking SR to public procurement, by including social and environmental criteria in public procurement procedures, and providing guidance to national governments on how to include social and environmental concerns in public procurement policies. They can promote SR by assuming one or a combination of various roles. These roles can be categorized as follows:

- Regulating - Governments define minimum standards for business performance embedded within the legal framework;
- Facilitating - Public sector agencies enable or stimulate companies to engage with the SR agenda or to drive social and environmental improvements;
- Partnering - Public sector bodies can act as participants, or facilitators (public private partnerships, for instance);
- Endorsing – This role can take various forms, including through the mention of SR in policy documents, the government as market player and consumer in public

procurement and public sector management practices, or direct recognition of the efforts of individual enterprises through award schemes.

At first sight, socially responsible procurement activities seem to have a higher cost, but the imperative is to consider the life cycle cost. Ultimately, the cleaner and safer society will have a lower long-term cost. This is already discussed in TCO.

Organizations, like individuals, have ethical standards and ethics codes and policies. The ethical standards of an organization are judged by its actions. For example, unethical procurement arrangements includes not respecting - (i) the principles of non-discrimination, for example by favoring suppliers from a certain region or country, (ii) the equal treatment, for example favoring a certain label, (iii) principle of transparency, for example by making the demands too complex and ill communicated for the supplier to be able to properly understand. Thus they have to understand it is necessary to invite only suppliers to whom they are eligible to award a contract to submit bids, to keep competitive price and other information confidential, to award the contract to the best qualified bidder, to notify unsuccessful bidders promptly so that they may reallocate their resources, to treat all bidders alike and to relevant information should be given to all potential bidders. The ISM (Institute for Supply Management) has addressed the issue of ethics and set-up principles and standards of procurement practice.

- ✓ Avoid the intent and appearance of unethical or compromising practice in relationships, actions, and communications.
- ✓ Refrain from any private business or professional activity that would create a conflict between personal interests and the interests of the organization.
- ✓ Refrain from soliciting or accepting money, loans, credits, or prejudicial discounts, and the acceptance of gifts, entertainment, favors, or services from present or potential suppliers that might influence, or appear to influence, procurement decisions.
- ✓ Handle confidential or proprietary information belonging to employers or suppliers with due care and proper consideration of ethical and legal ramifications and governmental regulations.
- ✓ Promote positive supplier relationships through courtesy and impartiality in all phases of the procurement cycle.
- ✓ Refrain from reciprocal agreements that restrain competition.
- ✓ Encourage all segments of society to participate by demonstrating support for small, disadvantaged, and minority-owned businesses.

- ✓ Enhance the proficiency and stature of the procurement profession by acquiring and maintaining current technical knowledge and the highest standards of ethical behavior.

It is the Korean general competition law and aims to promote creative business activities and protect consumers by facilitating fair and free competition in the market. It encompasses all traditional issues of competition policies, i.e. anti-competitive M & As, cartels, resale price maintenance, monopolization, attempt to monopolize, exclusive transactions, etc., which are subject to general competition laws in other countries as well. In addition, this law addresses unfair trade practices, undue subsidies / debt guarantees / equity investment among affiliates of large business groups. It also gives the KFTC (Korea Fair Trade Commission) the right to investigate into possible law violations, including rights to investigate, to order submission of information, to maintain custody of materials, etc.

Small and medium size business (SMB) firms are not quite powerful enough to compete against big companies even if they are so capable, but more than half of Korean people are involved in small or medium size business. Therefore, it is a government's responsibility to (i) assist small and medium size business to develop, grow, and ensure their long-term success; (ii) continually foster an environment where they can compete successfully for a fair share of government procurements on their own merits; and (iii) assist large businesses to increase subcontracting opportunities for small, disadvantaged, women-owned businesses.

The Korean PPS has implemented various policies with a view to lowering the entry barrier into government market for Small and Medium Businesses, Regionally Based Businesses, and Women-owned Businesses. In 2007, PPS procured 66.5% of its overall domestic procurement from small and medium sized businesses, 59.6% from regionally based businesses, and 4.8% from women-owned businesses. In particular, procurement from women-owned businesses tripled over the past five years, from 226.3 billion won in 2003 to 638.8 in 2007. This resulted from the termination of single tendering policy with SMB cooperatives, which increased women-owned businesses' opportunities for participating in competitive tenders. In addition, PPS provided further opportunities through various policy implementations for women-owned businesses, such as limited competition among women owned businesses for small scale procurements, assigning extra points in credit evaluation, and assigning higher priority in selecting outstanding products.

Additionally, in order to support SMB suppliers in terms of their financial capability in contract performance, the Korean PPS introduced the Network Loan in 2006 for contracts which PPS should pay on behalf of end-user organizations. The Network Loan enables

contractors to obtain a loan corresponding to maximum 80% of the total contract value, without providing any security other than written confirmation. All processes for the Network Loan are conducted online from the contractor's registration to actual banking following the receipt of PPS's contract confirmation, achieving loans after the review, and PPS's payment to the bank at completion of delivery. In the first year since introduction, a total 64.4 billion won worth of loans were made, and currently three banks including the Industrial Bank of Korea, Woori Bank, and Hana Bank are participating in the program. In 2007, the total amount of the loan reached 110.9 billion won, increasing by 67% from the previous year's total of 66.4 billion won.

The Korean PPS introduced MAS (multiple award schedules) to overcome the lack of diversity in procurement products. The MAS is designed to simplify, streamline, and ultimately accelerate the process for vendors to obtain MAS contracts. Under MAS contracts, PPS awards contracts to multiple companies supplying comparable services and products at varying prices. As a result, PPS can establish contracts with responsible suppliers in SMB to provide customers with access to a wide variety of supplies (products) and services. In February 2006, PPS released the largest online shopping mall in the public sector. It has continuously expanded the range of MAS items to provide a more satisfactory service, and promoted user convenience by developing various theme shops and establishing the intelligent product search system. Such innovation efforts assisted end-user organizations in securing more options to select products, and SMB in developing new markets and strengthening competitiveness as well.

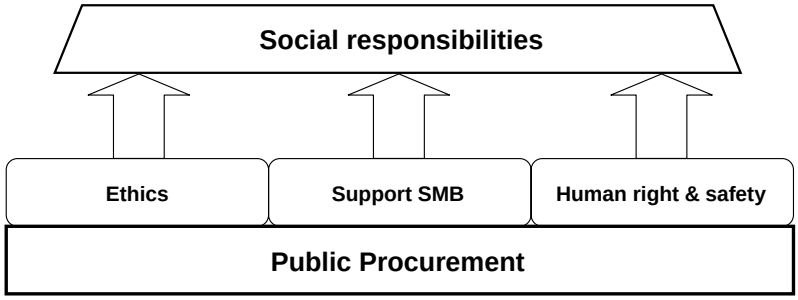
Human rights refer to the concept of human beings having universal natural rights, or status, regardless of legal jurisdiction or other localizing factors. The procurement policy contains (i) treat people with dignity and respect, (ii) support and respect the protection of national human rights.

Also, regardless of the country in which procurement officials, they must be able to address the issue of compliance with environmental health and safety laws in the country where they work. Health and safety refers to the condition of being protected or free from the occurrence of risk of injury, danger, failure, error, accident, harm or loss. For example, in the United States, workplace safety is covered by the OSHA (Occupational Safety and Health Act) enacted in 1970 to establish federal standards for safety in the work place. Administered by the OSHA, the act has four purposes; (a) to establish workplace safety standards, (b) to provide rules for conducting investigations of accidents as well as routine inspections, (c) to implement recordkeeping requirement and (d) to require

research on safety in the workplace issues. Thus, procurement officials must (i) provide a safe and healthy environment for all suppliers, (ii) support the continuous development and diffusion of safety and health practices throughout the organization and the supply chain, and (iii) design and redesign products to ensure product safety.

To characterize the public procurement for social responsibilities, the diagram is depicted in the <Table 6>.

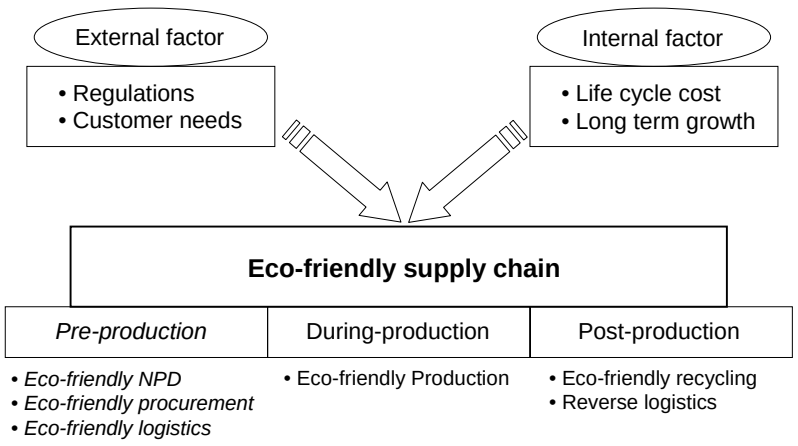
< Table 6: The role of public purchasing for social responsibilities >



5. Eco-friendly activities

Known by any of a variety of terms such as “eco-friendly procurement,” “affirmative procurement,” “environmentally preferable purchasing,” and “green procurement,” this approach means integrating environmental factors into procurement policies. What motivates eco-friendly activities? There are many driving forces, but when summarized, it can be said that two factors such as external and internal factors. The whole eco-friendly supply chain diagram can be depicted as follows;

< Table 7: Eco-friendly supply chain >



As seen in <Table 7>, eco-friendly supply chain can be segmented into three steps such as (i) pre-production, (ii) production, and (iii) post-production stage. Ideally, all eco-friendly activities should be done as early as possible to prevent further problems. Thus, in the pre-production stage, procurement can play a major role to handle environmental issues. As we know in quality control, preventive activities before quality problem occurs are the best way to manage the quality, which makes a good sense to control materials to buy before it can relate to the environmental problems. Therefore, effective eco-friendly procurement can contribute to an organization's overall environmental goals and undertakings in a number of ways. In most countries, they require certain eco-friendly procurement activities, so the whole policies and regulations for green procurement activities can be summarized as follows;

- Develop a waste prevention and recycling plan implementing the green procurement requirements
- Consider environmental factors, as appropriate, in acquisition planning for all procurements and in the evaluation and award of contracts
- Revise existing specifications, descriptions, and standards to enhance the procurement of environmentally preferable products and services
- Require government contractors to follow green procurement guidance
- Include environmental and recycling concerns in the acquisition and management of government space, including leased space and the design and construction of new buildings
- Eliminate or reduce hazardous waste generation and the need for special handling, storage, treatment, and disposal
- Promote the use of nonhazardous and post-consumer recycled-content materials
- Examine life-cycle costs in addition to initial costs when comparing prices
- Consider cost-effective waste reduction opportunities when creating plans, drawings, specifications, standards, and other product descriptions

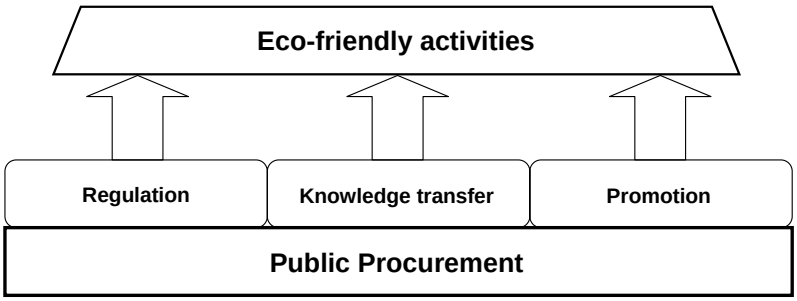
In U.S.A. cases, EPA (Environmental Protection Agency) has developed a series of guiding principles to further define environmentally preferable procurement. The guidance encourages procurement managers to select products that minimize adverse environmental impacts and maximize beneficial environmental attributes without compromising traditional price and performance considerations. To compare environmental impacts, EPA encourages procurement managers to evaluate all of the environmental impacts of a product throughout its life cycle — from the impacts associated

with mining the raw materials to impacts when the product is ultimately disposed of. To compare impacts, EPA suggests evaluating the following environmental attributes when selecting a product or service such as Energy efficiency, Recycled content, Recyclability, Water efficiency, Resource conservation, Greenhouse gas emissions, Waste prevention, Renewable material percentages, Adverse effects to workers, animals, plants, air, water, and soil, Toxic material content, Packaging, Transportation.

In Korean cases, in order to bolster the new administration's vision of "Green Growth", The Korean PPS has forged ahead with its transition into Green Procurement, putting priority in energy-efficient and low-carbon products. PPS has increased public purchases of eco-friendly, energy conservation products to promote new technology development in this area and nurture the industry into global competitiveness. With a view to a better implementation of this policy, PPS has required the labeling of an energy efficiency rating for government-purchased goods, offered procuring entities 10% discount on procurement fees for procurement energy efficient products, and regulated the use of energy conservation technology and materials in public works. Through these methods, PPS has encouraged public purchase of energy efficient products and technology. Also, the Act on the Promotion of the Purchase of Environment-Friendly Products, passed in 2005, requires public agencies at national and local levels to publish green procurement policies and implementation plans, carry out the latter, and report results. The Environment Ministry is asked to publish guidelines, designated items and evaluation criteria.

To characterize the public procurement for eco-friendly activities, the diagram is depicted in the <Table 8>.

<Table 8: The role of public procurement for eco-friendly activities>



6. Industry innovation

Generally speaking, public procurement can be divided into two types, (i) first case - the purchase of standard and already

existing products like commodities as paper, clothes, appliances and (ii) second case - technology procurement like new or developing skills and technologies. The second category is referred to if a government announces to foster public procurement as an innovation policy instrument. Since public procurement is a big customer of industry, industry should pay attention to this customer – public procurement sector. If the government wants to develop a certain technology or skill, they ask industry to do it. For example, if a military procurement program wants to buy a certain machine with a new technology, the industry should develop the technology since it is the customer's need. Thus, it can be said that public technology procurement is a demand-side instrument to innovate a new technology of industry.

Furthermore, since the purchase of the new product by the government is contracted, the market risk for the developing and delivering firm is reduced since a certain amount of sales is guaranteed. Often, the government is a large scale and major user of innovation and technologies. A major advantage of public procurement in innovation policy is that government specifies a desired output and leaves it to the creativity of private businesses to achieve this result with the most effective and efficient technologies.

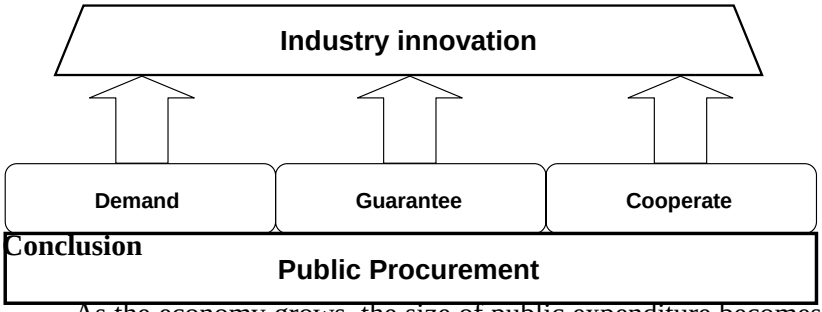
There is a growing tendency for many countries to use cooperation between public and private sector to resolve procurement needs. It can be said PPP (public private partnerships). Originally, early experience has been limited to basic infrastructures and services such as hospitals, rail road, and construction infrastructure but later it can apply to the areas of defense, utilities and high tech industry. Such a partnership approach offers a different procurement process in which it might be possible to imagine a greater role for innovation (earlier consultation with the market, greater dialogue and creativity, value for money not just lowest cost approach, innovative contractual arrangements etc). This form of agreement may also represent a way for bringing in innovative SMB into the procurement process through sub contracting procedures.

The Korean PPS has continued to expand the support program for outstanding technology products from SMB and venture enterprises, to include patented products, utility models, and products. The total purchase of outstanding technology products in 2008 amounted to 1.55 trillion won, an increase of 14.2% from 1.35 trillion won in 2007. Particularly in 2008, PPS revised the criteria for the outstanding product evaluation, raising the score allotted for quality innovation from the previous 30~35 scale to 35~40 scale out of 100. Also, a new category of high energy efficiency products was added to the classification of outstanding products, thus allowing high energy efficiency certified products to be given additional points in Contract Performance Capability Evaluation. Through such

measures, PPS successfully broadened the opportunities in the public market for SMB with high technological capacity. In order to promote the purchase of high energy efficiency products among public institutions, PPS opened a separate online shopping mall in KONEPS designated for energy conservation products, and offered 10% procurement fee discount on their purchasers. In order to resolve problems of reluctance in procurement excellent technology products due to the high price procurement, PPS established the total cost calculation system in 2006 where PPS fixed and published reasonable prices for new technology products. In addition, PPS selected professional cost calculation agency at a certain level, and legislated and implemented the related standard to enhance objectivity and transparency of the system. The standard states that the price should be determined by the cost review committee, and thereby supports a reasonable cost calculation and can be used as cost guideline in the government procurement market.

To characterize the public procurement for industry innovation, the diagram is depicted in the <Table 9>.

< Table 9: The role of public procurement for industry innovation >



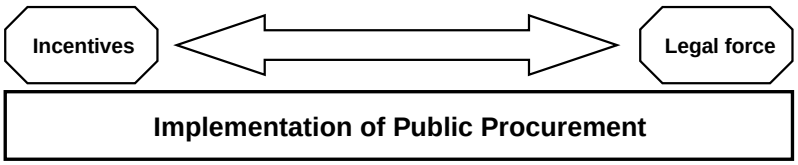
Conclusion

As the economy grows, the size of public expenditure becomes larger and procurement is one of the most important activities in governmental operation. Therefore, public procurement can influence many areas and change the way of doing things in the nation. That is the power of public procurement. If this is true, can public purchasing make society better?

The answer is yes. In this paper, we classify the role of public procurement into five major categories to explain how this can be done. This paper also shows the way of making procurement more efficient and directed. Details for related issues are fully examined and systematic diagrams to analyze each category are developed.

How can this be implemented? The government has many options for that.

< Table 10: The spectrum of procurement arrangement >



In <Table 10>, moving to the left promotes desirable behavior as a reward. Consider options like “small business encouragement,” “partnership of new technology development,” “green awards,” and so on. Moving to the right restricts undesirable behavior through punishment. “Restriction of certain material usage,” “indemnification of safety issues,” “responsibility of ethical procurement,” and others come to mind. Therefore, there are many combinations of how the procurement policies may be implemented more effectively and efficiently. The government has to understand which way is the most appropriate for a certain policy or action. Future research will ask what will be the optimal arrangements of all five areas which have been discussed, and how they will be balanced.

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