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著者	Watanabe Tsunemi
journal or publication title	Society for Social Management Systems Internet Journal
volume	3
number	1
year	2007-03
URL	http://hdl.handle.net/10173/1635

WERE CONVENTIONAL PUBLIC CONSTRUCTION PROCUREMENT PRACTICES IN JAPAN REALLY UNIQUE AND PROBLEMATIC?

Tsunemi WATANABE
Kochi University of Technology

ABSTRACT: Conventional public construction procurement practices in Japan have been often considered to have unique and problematic characteristics as compared with those in foreign countries. Looking at business transactions in other field than public works, however, there exists a sector with similar characteristics. The objectives of this paper are, thus, to demonstrate that conventional public construction procurement practices in Japan and the arrangement employed by De Beers to market gem-quality rough diamonds have very similar characteristics and the conventional Japanese practices have an economic viability when there is sufficient budget and massive construction is required.

KEYWORDS: public construction procurement practices, marketing of gem-quality rough diamonds, comparative analysis

1. INTRODUCTION

Conventional public construction procurement practices in Japan have been often considered to have unique and problematic characteristics as compared with those in foreign countries. Looking at business transactions in other field than public works, however, there exists a sector with similar characteristics. A business transaction with similar characteristics is the arrangement employed by De Beers to market gem-quality rough diamonds.

Kenney and Klein discussed viability of this marketing arrangement. The objectives of this paper are, thus, to demonstrate that conventional public construction procurement practices in Japan and the marketing arrangement by De Beers have very similar characteristics and that the conventional Japanese practices have an economic viability when there is sufficient budget and massive construction is required.

2. CHARACTERISTICS OF THE MARKETING

ARRANGEMENTS BY THE DE BEERS GROUP

The Central Selling Organization (CSO) of the De Beers Group markets the largest number of gem-quality uncut diamond in the world. Main characteristics of the marketing arrangement employed by the De Beers are as follows:

- i) the CSO categorizes each rough diamond by shape, quality, color, and weight;
- ii) only invited buyers are eligible to purchase stones; and
- iii) the CSO assembles a single box (or “sight”) of diamonds for each buyer which he/she wishes to purchase. There is no negotiation over the price or composition of the site. Buyers who reject the diamonds offered them are deleted from the list of invited customers.

The values of stones within each category are not the same, and actually their variance is substantial. The sales price can be said to be the average price in

each category.

Some stones may be undervalued, and other stones may be overvalued. If buyers are allowed to search for undervalued stones and only purchase them, overpriced stones are remained.

To avoid rejection of overpriced stones by buyers, the seller also needs to increase categorization efforts and price each stone more accurately.

Since seller's and buyers' valuing criteria are similar; however, their evaluation efforts are duplicative and end up with creating social costs. Kenney and Klein label the attempt by buyers to obtain an informational advantage over the seller "oversearching." The arrangement by the De Beers has advantage to avoid the oversearching and to save costs of evaluating values of stones.

A part of saved evaluation costs is used as the premium, which is "added" to the sales price. "Addition" of the premium plays an important role in discouraging buyers to reject their assigned sights and completing sell and buy transactions smoothly.

Kenney and Klein mention that the CSO of the De Beers group possesses two "brand names." The first one is that "the expected discounted value of the net marketing cost efficiencies associated with their selling arrangement, which assures buyers that they will not cheat." The second one is that the CSO "will share these marketing cost savings with buyers in the future, which prevents buyers from "cheating" them."

3. COMPARATISON BETWEEN THE TWO APPROACHES

If we recognize the Japanese public clients and De Beers group as the client and contractors and buyers as trading partners of the clients, conventional public construction procurement practices in Japan and the arrangements by De Beers group have very similar characteristics.

Their similarities are characterized in Table 1 with respect to characteristics of the client, a method of estimating transaction price, change of transaction price, discontinuation of transaction, level of transaction price, and process of determining transaction partners.

The first similarity is that the both clients have been monopolistically conducting a great amount of transactions. In 1977 fiscal year when the number of ordered public works was the highest in Japan, more than 550,000 public works were ordered. One of the highest concerns for the both clients is smooth completion of transactions.

The second similarity is that the both clients efficiently estimate mean values or statistical average of stones or construction service of which they would like to conduct transaction and set those values as the upper limit of the transaction price. In Japanese public works through field surveys of material price, labor price, and depreciation of machine and broad survey of quantity-per-unit, the ceiling price is derived. The engineer's estimate obtained in the above-mentioned process seems more exhaustive than those in foreign countries. In deriving this ceiling price, however, all construction conditions of each work are not necessarily incorporated. Thus, this price is still considered average price of the works given conditions.

The third characteristic is that the both clients set the upper limit of the transaction prices and do not accept negotiations for price change in principle. In the Japanese public works the ceiling price strictly becomes the upper limit. If all bid prices exceed the ceiling price, contractors are asked to re-bid. In this case, the ceiling price is not changed.

Furthermore, in the current standard covenants of public works, there is no article prescribing equal rights of the contractor to make claims against the client. Some change in contract value should be decided through negotiations between the client and

Table 1 Similarities between the two approaches

	Arrangement by De Beers Group	Conventional Public Construction Procurement Practices in Japan
Characteristics of client	-The largest market of gem-quality rough diamond in the world	-Monopolistic transaction
Determination of transaction price	-Sales price as the averaged value -Determining the price through imperfectly categorizing characteristics of gem	-the ceiling price as the standard value -Detailed construction conditions are not necessarily fully incorporated into estimation of the ceiling price
Change in transaction price	-Price negotiation is not accepted.	-The ceiling price has the strict upper-bound. -Claim from the contractor is not accepted.
Discontinuation of transaction	-Change in pre-selected box is not accepted. -Buyers' rejection of the sales offer leads to the withdrawal by De Beers of future invitations to purchase stones	-Contractor's rejection of designation, "offer" to be the winner of the contract, request of providing services not specified in the contract leads to the withdrawal by the client of future designation
Level of transaction price	-Premium is put on the averaged value of categorized stones	-Prices of public works seem higher than that of similar private construction. -Generally high return associated with design document change
Determination of transaction partner	-Buyers are selected by the De Beer Group	-Bidders are designated by the client.

the contractor in principle. However, it has been pointed out for a long time that "contract issues are often left up to the client and the contractor is apt to be in a weaker position." The public clients often determine the change in contract value by themselves.

There are the following merits associated with the ceiling price with the strict upper-bound and the public client's discretionary way of changing the contract value. First, the above-mentioned nature makes the client easy in controlling the budget by clearly setting the upper limit of transaction price. Second, this nature has avoided "oversearching" for the both client and contractor, that is, the behavior to

search the accurate transaction price with the excessive precision.

The fourth similarity is that the client does not substantially accept an offer from the partner to withdraw from this transaction even though the client determines the transaction price in a one-sided manner. Under the conventional practices, the designated contractor cannot refuse the participation in the bid. Moreover the contractor who is agreed to win the contract among designated contractors must win the contract no matter how low the ceiling price is set for that particular project. If all bid prices are lower than the ceiling price, the public client would lose his/her face. Furthermore, in practice, some

public client requests the contractor to do various types of service which are not specified in the contract. The contractor cannot refuse to do these jobs either.

If the business offer is rejected by the partner, the client has to seek the second partner. If the second partner rejects the offer, the client has to seek the third one. If the rejection is allowed, thus, smooth business transaction would be possibly hindered with a series of rejections. Not accepting the business offer of rejection becomes a key for the client to ease time control in business transactions.

The fifth concern is that the averaged price of the actual transaction price seems to be set higher than the estimated market price. Comparing the prices of public and private building construction in which their direct comparison is possible, the price of public works is considered higher than that of similar private building. Under recession, especially, difference in price between the public and private buildings becomes even larger.

Regarding the design document change, not a few indeterminate factors exist, which is often criticized by contractors. Nonetheless, it has been often pointed out by the client that the design document change is actually high return business for the contractor.

Here by adopting the concept by Kenny and Klein, we define the premium as the difference in the awarded price of public works and its real market price. There may be some projects whose execution would only bring deficit; however, the averaged premium among projects executed by one contractor is generally considered a high value. A high positive premium has played an important role in realizing smooth and secured implementation of public works.

The sixth similarity is that the client only does business with selected partners. Under the designated competitive bidding, the designated bidders can only bid. In dango, which is a type of

rotational and complementary bidding, initiated or led by the public client, the client determines the “winner” contractor for a project called for a bid. Selecting partners has played an important role in achieving the certainty of results.

Kenny and Klein show that “the CSO can decrease the probability that stones will be rejected can be decreased by i) increasing expenditure on presale classification,” thereby decreasing the variance in variance of stones in the sight; “ii) by increasing the share of the marketing cost savings, the premium per stone”; “or iii) by increasing the number of stones offered to each buyer per period.”

By the designation in which continuous transactions are done with a limited number of contractors, the volume of transaction increases between the client and each contractor. Thus, the designation corresponds to iii) in the above-mentioned measures.

Implementation of each measure needs different types and levels of costs. Implementation of the first measure needs higher searching costs of true value. The second measure literally increases the premium. However, the third measure does not need to increase either the search cost or premium.

The results of this analysis are also applicable to designation practice of the Japanese public works. First, the designation corresponds to the third measure, that is, to increase in the amount of transactions. Designation with long-term business relationship means that each designated contractor generally has more works to do for the public client who designates. Second, the designation prevents contractors from rejecting offers without increasing the search costs or premium.

In the two types of transactions with the six similarities, the expectation bared by the client towards contractors is considered the assurance defined by Yamagishi. The both clients are very much concerned with smooth completion of many

transactions. There is a possibility, therefore, that the social uncertainty becomes high for the client.

In order to deal with this situation, the client selects certain business partners, has a long term business relationship with them, and adds premium to the market price and makes the transaction price higher. Through these measures, the client creates the assurance, that is, to remove the social uncertainty by developing a framework that selected partners gains much profit as long as they stay in the business relationship.

In the next section, the above-mentioned characteristics of the conventional public construction procurement in Japan are explained through transaction economics approach, and their economic viability is comprehensively discussed.

4. ECONOMIC VIABILITY OF JAPANERSE PROUCUREMENT PRACTICES

4.1 Transaction Costs in Construction

Transaction costs are defined as costs which should be shouldered by those who participate in transaction of goods or service.

Grunberg and Eve classify transaction costs for those who procure construction service as follows:

i) Search costs are the costs of finding out information about who is offering what products or services and at what prices.

ii) Product or service specification costs arise because a market supplier will only provide what they have contracted to supply. The product or service to be supplied therefore has to be specified very carefully and fully in order to obtain the desired quantity and quality.

iii) Contract selection, contract design, and negotiation costs are the costs of finding or creating forms and conditions of contract that are suitable to the particular needs of the buyer in the particular transaction in question.

iv) Supplier selection costs occur if the product or service to be purchased does not have a single, uniform market price, as is the case in construction. Normally a price competition will have to be organized between potential suppliers, with the contract awarded to the lowest priced tenderer.

v) Contract performance monitoring costs are transaction costs incurred due to the need to measure and control performance in terms of its price, timing and quality. In construction it is not sufficient to measure a supplier's performance once only, on completion of the contract. This is because the costs of remedying poor quality become exorbitant, whilst quality itself becomes very hard to measure, once the work in question has been incorporated into a finished building. Time performance obviously must always be continually monitored rather than just measured after the event if there is to be scope for corrective measures.

vi) Contract enforcement costs are the cost of legal bills and delays.

Comprehensive costs associated with construction service are the addition of costs needed for construction and transaction costs mentioned above. Hereafter this addition is referred as comprehensive construction costs. The comprehensive costs consist of the following components:

i) construction production costs (pure production and finance costs);

ii) advance transaction costs (search, product or service specification, contract selection, contract design, and negotiation, and supplier selection costs);

iii) interim transaction costs (contract performance monitoring costs); and

iv) posteriori transaction costs (contract enforcement costs)

Efficiency of procurement of construction service is not solely represented with construction production costs. For example, the British market

which has attempted to minimize the production costs through market is criticized against its inefficiency. Overall efficiency of procurement is partly represented with the comprehensive construction costs. A goal of designing procurement systems of public works is to find and implement advance and interim transaction processes such that the comprehensive construction costs are minimized.

4.2 Level of transaction costs associated with conventional schemes

Level of transaction costs associated with conventional schemes is discussed as follows.

Search costs are considered low. The first factor is nature of competition as pointed out by Kunishima. That is, the conventional competitive bidding in Japan has been “controlled competition among contractors with the same business type and rank in the same region.” The second factor is an efficient way of ranking contractors based on scores of the business evaluation.

Product or service specification costs are also considered low. Characteristics to lower these costs are as follows:

- i) in not a few projects, scope of works are undetermined, and precision of design drawing is low;
- ii) the ceiling price is efficiently estimated through obtain the statistically averaged price of each project based on the records of past projects; and
- iii) in many types of works, standard rate of productivity is specified, and cost estimation manual is published. These enable public client to do cost estimation easily.

Regarding contract selection, contract design, and negotiation costs, one component pushes up them, but the other components lower them. The former component is slicing and packaging contracts, which has been employed to achieve equal sharing among contractors. The latter components are no room for

price negotiation, which avoids oversearching, and existence of assurance, which removes the social uncertainty and minimizes the role of contracts.

Supplier selection costs are also low because the winner is basically determined through the dango among contractors or the dango initiated and led by public client.

It is not straightforward to estimate contract performance monitoring costs because role sharing of site management and monitoring are often unclear among related parties. It is reported, however, that “under the term of “responsible construction,” which is often used by construction parties but not specified in the contract, the client often requests contractors to do works out of project scope.” This report hints that the contract performance monitoring costs are also low.

It should be noted, however, that in many Japanese public works payment from the client to contractors is generally made at the beginning and completion of projects. Thus, many monitoring works and their related costs concentrate at the end of project.

Contract enforcement costs are low because there has been hardly dispute between the client and the contractor in Japanese public works.

Thus, advance, interim, and posteriori transaction costs associated with conventional public construction procurement practices are considered low.

5. STRUCTURE AND CHARACTERISTICS OF ASSURANCE SYSTEMS

Figure 1 represents a basic structure of bidding and contracting schemes, which have been formed after high economic growth period since the end of 1950's. The author calls this scheme the assurance systems. The systems consist of designation and dango bidding and unilateral but high return contract.

Two types of brand name in transaction by De Beer Group, which Kenny and Klein pointed out, also exist in the assurance systems.

The advance, interim, and posteriori transaction costs are reduced by creating the assurance. Efficient execution of projects at low transaction costs corresponds to the first type of brand. Furthermore, it is possible to understand that these low transaction costs are returned to contractors through high return contract. This return to contractors corresponds to the second brand.

There is a danger that nature of unilateral contract lowers client's trustworthiness. However, the second brand has been playing a crucial role in maintaining the trustworthiness of the client.

The ceiling price in the assurance systems has brought two benefits. First, its upper-bound eases client's management of budget and time because no price negotiation is allowed. A combination of high ceiling price and designation prevents incompleteness of contract and promotes smooth construction. Thus, the high ceiling price eases time and quality management for the client.

The assurance systems can exist because of low taxpayers' consciousness for Japanese and sufficient budget.

Similarly to arrangement employed by De Beers Group, the assurance systems had achieved efficient

transactions and avoided occurrence of the social uncertainty. The systems are effective and efficient when there is sufficient budget and massive construction is required.

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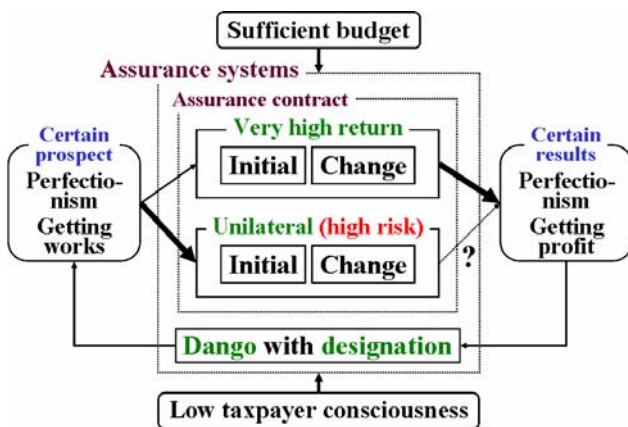


Figure 1 Structure of Assurance Systems