

Construction Market and Tendering Procedures in KOREA

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1. CONSTRUCTION MARKET AND INDUSTRY

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1.1 Macro Economic Review and Outlook

As many other East Asian countries Korea has experienced a severe economic depression triggered by foreign currency crisis in December of 1997. Bail out financing from the IMF helped Korea to overcome the immediate financial panic, and the economy is now slowly recovering.

In 1998 the economic growth fell to -6.7% level from 5.0% of the previous year, and recorded an all time high unemployment rate of 6.8%. Consumption and investment decreased dramatically with the construction investment following the trend. All the while consumer price increased by almost 8% showing signs of stagflation. Foreign trade sector fared better due to the low won with 123 billion US\$ trade surplus which helped building up the foreign currency reserve.

After a strict, long overdue structural reform on financial institutions, business management and government system, the worst seemed to be over by 1999. The economic growth rate returned to brisk 10.7% level, and unemployment rate slightly improved to 6.3%. Consumer price increase stayed at below 1%, and trade surplus again reached 29 billion US\$. However, the confidence of consumers and investors were still shaky and consumption and investment remained depressed.

• Main macro economic indicators(% change at constant price)

	1999* ¹	1996 (%)	1997 (%)	1998 (%)	1999 (%)	2000* ² (%)
GDP	483.8	6.8	5.0	-6.7	10.7	8.6
Private final consumption	318.5	7.1	3.2	-11.4	10.3	7.6
Government final consumption	48.8	8.2	1.5	-0.4	-0.6	2.0
Fixed capital formation	135.2	7.3	-2.2	-21.2	4.1	15.7
Construction investment	84.1	6.1	2.3	-10.1	-10.3	4.1
Exports of goods & services	145.5	3.7	5.0	-2.8	9.0	17.9
Imports of goods & services	116.8	11.3	-3.8	-35.5	28.3	36.5

*1 Nominal price in trillion won, trade figures in billion USD

*2 2000 figures are forecasts of KDI

The prediction on this year's economic performances is being continually adjusted because the economic situation is still volatile. Currently, economic growth of 8.6% and unemployment rate of 6.3% are expected. Consumption and investment are also picking up. The size of current account surplus will come down to a more modest level.

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Economic performance wise, Korean economy seems to be getting back on the right track. However, the difficulties facing Korea are far from being over. Whether we can completely ride out of the crisis depends on the continuation of economic reform that started at the times of hardship. Most difficult task will be changing people's minds and attitudes towards more open and free economy. Hopefully, through this painful process Korea will regain confidence from the world.

- Main demographic and price indicators

	1997	1998	1999
Population(millions)	46.0	46.4	46.9
Households(millions)	11.5	11.7	11.9
Rate of unemployment(%)	2.6	6.8	6.3
Consumer price index(% change)	4.5	7.5	0.8
Construction deflator(1990=100)	112.7	115.5	116.8
Short term interest rate(call rate)* ¹	5.0	3.0	4.7
Long term interest rate(return on corporate bond)* ¹	13.4	15.0	8.7
Annual average exchange rate with \$US	951	1,399	1,190

*1 Year end figures

1.2 Construction Market Review and Outlook

The construction industry thrived during the 90s with the increase in housing demand and then infrastructure demand. In 1998 however, the total contract amount decreased rapidly due to the economic emergency. The construction sector, by its nature, felt deeper impact from the economic current than other industries. Even before the onset of the crisis many experts predicted that two-digit increase in total amount will slow down to around 5% level by the year 2005. The cold reality was ushered in sooner than expected.

The government has done its best to boost the expenditure on construction so as to support the general economy and employment, but the fiscal constraint offered little room for such policy. Therefore, the difficulties confronting the construction industry will persist well into the future.

1.2.1 Sectoral Trends

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For quite some time private sector demand overtook the public sector and maintained 6:4 ratio. Consistent increase in the private building construction was the main force in the reversal. Similarly, the share of building and civil construction was kept at more or less 7:3 ratio. Overall, the construction market enjoyed healthy growth with private building activities as the dominant force.

The financial crisis changed these trends completely. In 1998, the total contract value dropped by more than 40% due to the sharp decrease in the construction investment, severely damaging already oversized industry. Moreover, faced with an interest rate higher than 20%, many contractors went bankrupt and the rest were hovering for survival in the future. To remedy the situation the government increased its expenditure on construction to pump-up the economy. As a result, the role played by the public and civil construction increased visibly, but it had only limited effect in reviving the construction economy.

• Construction market by order received (general contractors)

	1999* ¹	1996 (%)	1997 (%)	1998 (%)	1999 (%)	2000 1/4 (%)
Private building construction	23,080.3	11.4	1.7	- 58.4	46.5	138.1
Private civil construction	3,612.1	7.1	60.7	- 59.0	37.8	44.2
Total private construction(A)	26,692.4	11.0	7.4	- 58.5	45.2	125.0
Public building construction	7,259.2	10.3	6.3	- 13.0	2.3	16.9
Public civil construction	17,185.0	84.4	10.4	- 18.3	- 23.3	16.3
Total public construction(B)	24,444.1	59.2	9.4	- 17.1	- 16.9	16.4
Total contract amount(A+B)	51,136.5 (43.0)* ²	28.1	8.3	- 40.1	6.8	71.6

*1 Nominal price, billion won

*2 Billion US\$

In 1999, as in other industries, deferred demand led the market, and total contract amount started to grow again. However, it was rather a technical rebound from the previous year's bottom, and for the industry the hardship continued. We expect a better year in 2000 as is evident in the first quarter figure. The overall contract amount will increase dramatically this year with the private sector leading the way. Even in the infrastructure area, private sector participation is expected to increase under the improved institutional set-up introduced in 1999.

1.2.2 Major Projects Programmed and Underway

Name	Total cost	Construction	Explanation of project
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	(trillion won)	period	
Seoul-Pusan Rapid Railway	est. 17.6	1992-2005	TGV type railway(400km)
Inchon International Airport	est. 7.3	1992-2000	First phase(2 runways) 2 more runways will be added by 2020
Yongjungdo Free Trade City	est. 5.2	at feasibility study stage	Focal point for attracting foreign investments in the Inchon Airpot region
Seoul-Inchon Airport Highway	est. 1.1	1995-2000	Private sector participation(Samsung etc.)
Kyungin Canal	est. 1.4	1998-2002	Waterway connecting Seoul and Inchon, Private sector participation(Hyundai etc.)
Seoul 9 th Subway	est. 2.3	1998-2004	50% of total cost matched by Seoul
West Coast Highway	est. 4.5	1990-2002	Built to promote regionally balanced growth
Southwest Region ICD & Freight Terminal	est. 1.2	1998-2006	Improve freight logistics of the region, about 60% invested by private sector
Gadok(Pusan) New Harbor	est. 6.1	1996-2011	Around 60% of the project led by Samsung consortium

1.3 Property Market Review and Outlook

The property market, with no exception, was struck by the force of the financial crisis and ensuing structural reform. During the developmental era the property price increased sharply, outpacing the economic growth rate. Even though with the introduction of the drastic measures of 'public concept of land' in late 80's the property market somewhat calmed down, it was never doubted that the price would go up sooner or later. As this price expectation settled in, many companies stocked up property in their investment portfolio far above what is directly needed. Now the real estates are pouring into the market as firms, pressured by the financial institutions, are trying to convert them into cash. Thus, the 'myth of property speculation' collapsed along with the bubble in the property value.

The average property price fell by 30-40% over the last couple of years and the market function of matching demand and supply did not work properly. The situation was much worse for the land than the buildings. The flow of Korean economy was being strangled at the bottleneck of the property market, impeding the economic restructuring process. This was creating a vicious cycle of depressed economy causing depressed property market and vice versa, or so called complex depression.

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To remedy the situation the government lifted such anti-speculation measures as transaction permit system, apartment allocation rule, greenbelt regulations, ban on the alien ownership etc. On the more active side, it bought up lands from firms and financial institutions through government agencies. The government is also trying to introduce asset based securities(ABS) to finance land purchase and increase convertibility of real estates.

Whether these efforts will be able to turn the tide remains to be seen. One certain fact is that there still is a gap between our perception and foreign evaluation of the price level. We are still thinking in terms of past price whereas foreign investors base the valuation of the property on the current and future returns. This means it will take some time before the property market regains its usual function. However, the transaction and price seem to be slowly picking up in the property market this year.

1.4 Outlook on Construction Industry

The construction industry played a major role in the rapid economic growth of Korea. To support economic development, the construction market grew faster than the average, increasing its share in GDP. From late 80s more than 20% of GDP was invested in the sector, a very high figure by any standards. We believe that the high construction investment ratio is one of the reasons for the compact economic growth shown by Korea.

The construction industry was also the most favored recipient of the fruits of the economic growth. Entry into the market was regulated by the licensing system such that existing contractors could increase their size and efficiency. The wage of construction workers and the price of construction materials were also held low by the government guidelines. These measures helped the industry maintain their competitiveness in both domestic and overseas construction markets.

However, the winds of change in the political arena and the talks at Uruguay Round and joining of OECD in the 90s brought about a completely new business environment. Construction market is opened up gradually and rules and regulations related to the industry are revised to conform to the international business practices. In addition, the unprecedented depression is causing a havoc in the construction industry. The upcoming five years will be a painful time for the industry going through a complete restructuring process.

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1.4.1 Registration of Contractors

As the government grip on the industry loosened during the late 80s, license began to be issued to eligible contractors first at regular intervals, and then now whenever upon request. Licensing system was also changed to registration with less requirements.

The 'Framework Act on the Construction Industry', amended in 1996, stipulates that any person who desires to operate a construction business shall be registered to the relevant authority. A general constructor who is given a comprehensive contract for construction work by a construction work ordering person must register at the Ministry of Construction and Transportation(MOCT). A specialty constructor who carries out a specific type of construction usually under subcontract with the general contractor must register with local authority. To register, one must satisfy the minimum requirements on capital amount and technical capacity etc. as per defined and classified by the Presidential Decree. The system of contractor registration is defined as follows;

Classification	Type of License	
General Contractor	3 types	Civil Engineering and Building Building Civil Engineering
Specialty Contractor	27 types of different trades such as	Boring & grouting, steel works, etc.

During the last decade the number of general contractors increased by more than ten fold numbering up to 5,126 firms, and likewise, specialty contractors increased almost seven times to around 25,620 firms. The number of overall construction firms (including contractors in electric works, telecommunication etc.) also more than tripled. Inevitably competition in the industry intensified. In 1988, before the deregulation, there were 468 general contractors each enjoying 21 billion won in contract value on average. As number of contractors increased faster than the total contract amount, the contract amount per firm decreased gradually up to 1997.

In 1996, 196 general contractors and 595 specialty contractors went bankrupt, raising the bankruptcy ratio to 5.6% and 2.8%, respectively. In 1997, the bankruptcy figure increased to 291 general contractors and 1,058 specialty contractors. In 1998, the bankruptcy figure for general contractor almost doubled from the previous year to 522. Last year, the situation somewhat improved to 112 cases of bankruptcy, but many more

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firms are expected to go under as restructuring progresses continue.

After the financial crisis the situation worsened as newcomers from other industry poured in to take advantage of the low entry barrier and protective measures applied to small and medium contractors. The trend is expected to continue in the near future. The government is reviewing its protective measures for small regional contractors such as preferential treatment and at the same time it is taking actions against ineligible contractors to drive them out of the market.

- Number of general contractors and orders received

	1988	1989	1997	1999	2000* ¹
Contract Amount(trillion won)	10	16	79	51	56
Number of Contractors	468	930	3896	5126	6000
Contract Amount per Contractor (billion won)	21.4	17.2	20.2	9.9	9.3

*1 Predicted value

Source: MOCT

Increased participation from the foreign companies is also a notable fact. Even before the Uruguay Round negotiation, there already existed a few small specialty contractors as joint ventures. They entered the market on the urge of Korean partners rather than to actively take part in it. However, recently, 100% foreign entities began to apply for general construction licenses.

- Number of direct investment from foreign construction companies

	1997.6	1998.2	1999.5
Japan	14	15	24
Asia	4	5	6
USA	7	8	11
Europe	9	10	13
Others	-	1	1
Total	34	39	54

Source : CAK, White Paper on Construction 1999

* Many more foreign companies are active in the fields of engineering and architecture etc.

Foreign companies are showing interests in such mega projects as Incheon Airport and rapid railway projects. In the fields of engineering, architecture and supervision where Korean competitiveness is rather weak we have witnessed much more active foreign entrance to the market. Thirteen foreign companies are participating in projects such as

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Seoul-Pusan Rapid Railway, Incheon Airport, West Sea Highway, and Gayang Bridge etc. The government is gearing up for further strengthening of competitive environment. The license system is moving further towards the direction of registration system and the ban on cross holdings of general and specialty license is being reviewed for deregulation. Also additional measures to accommodate foreign contractors are being adopted. If previous attitude can be described as somewhat obligatory and reluctant, current approach can be evaluated as sincere and eager towards foreign participation. Foreign participation is expected to grow.

• Efforts to open markets, relax foreign capital regulations and promote foreign investment

Policy implemented	Content	Implementation date (period)
Deregulation measures for effective market access	License issued upon request Obligatory membership to construction association and bond company relaxed Setting the ceiling amount on one contractor can take through company evaluation abandoned	1994 1997 1997
Other market opening (all construction related markets are opened)	Building rental and marketing services Land rental and land development & supply services	1998 April 1998 May
Lifting regulations on alien ownership of land	Restrictive measures on foreign ownership of land lifted, allowing in principle all types of foreign ownership	1998 June 26
Enactment of 'Foreign Investment Promotion Act'	Attitude change from restriction/management to promotion/assistance Provide free foreign investment zone Increase tax incentives Simplify investment process Establish one stop information and service center	1998
Reform 'Private Sector Investment Inducement Act'	Accept unsolicited private sector proposal Make evaluation and selection process more transparent Ensure higher profit margin lower risk Establish specialized organization Change process to accommodate foreign investments	1999

1.4.2 Number of Employees and Construction Labor

In 1970, construction industry employed 280,000 workers, 2.9% of total employment. The number of workers increased steadily and in 1997 more than 2 million employees

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worked in the construction field, 9.6% of total employment. Now the number decreased markedly to 1.5 million and 7.3% of total employment in 1999. This year the employment figure is expected to increase to 1.65 million persons.

If we compare the trends of construction industry's share of employment ratio to its share of value added in GDP, 10.9% in 1997 and 8.7% in 1999, we can conclude that the industry's productivity is improving.

The average wage also increased but in more erratic fashion. Up to Seoul Olympic in 1988, the wage increased mildly under the government guidelines. After the Olympic, however, changed political atmosphere and implementation of 2 million housing construction plan caused the wage to go up very rapidly. In 1987 the average wage was 12,903 won. Five years later, in 1992, the wage more than tripled. For the next five years till 1997 the trend of wage hike calmed down. In 1998, wage decreased due to decreased demand. As of 1999 we expect a mild increase.

- Average wage of construction outdoor-worker per day(won)

1995	1996	1997	1998	1999
65,849	70,847	73,975	70,179	71,137

Source: Contractors Association of Korea

1.5 Policy on the Construction Industry: Construction Industry Promotion Plan

In 1996 the 'Framework Act on the Construction Industry' was enacted in place of the 'Construction Business Act'. The substitution aimed at deregulation and simplifying construction related Acts and also to promote construction industry. The Act states that the MOCT must draft and execute a basic plan for the promotion of the construction industry every 5 years. The plan must include fundamental policy direction, measures regarding technology and manpower, ways to secure the quality of construction works, and policies to encourage small and medium construction businesses.

Our diagnosis on the policy environment and present situation is two folds. Due to the financial crisis the construction industry is in great difficulty. This painful experience for the industry would have come anyway with or without the short term shock. A longer term underlying current is that of globalization, localization and digitalization which translates into increased competition, forming of buyers' market and elevation of importance of the R&D investment for the construction industry. Both the mega-trends of 21 century and financial crisis are pressuring the industry to restructure.

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However, the crisis factor is inevitably pushing for faster reform than we normally would like to carry out.

Major tasks envisioned in the Plan are as follows: establish fair competition rule, increase productivity, secure environment friendliness and quality of the construction works, set up a new harmonious role for general and specialty contractors, strengthen technology/manpower/material/finance capacity of the industry, and encourage both inbound and outbound overseas construction. Through these and other detailed implemental measures we hope to build a construction industry that can compete with top level construction companies shoulder to shoulder.

2. TENDERING AND CONTRACTING SYSTEM

Tendering and contracting system is also being completely revamped and many deregulation and liberalization measures have been taken. Tendering methods regulated by region and by the size of the contractors are being replaced by more competitive mode, and we are seeing increased use of lowest bidder contract system.

2.1 Procurement Entities

Procurement entities can be divided into two groups: private and public. In 1998, the share of each entity was central government 16.3%, regional government 23.7%, public agency 22.7%, private sector 37.3%. Private sector's weight in the total construction demand increased as the economy matured. Basically, private sector does not need to abide by the 'National Contract Act' as long as it stays within the 'Framework Act'. It can give orders to any eligible contractors in any way it wants. However, private entity usually follows procurement rule set by the public entity. Contractors and subcontractors participating in the procurement process must also act within the boundary of rules set by the 'Fair Transaction Act' and 'Subcontract Act'.

Major public procurement entities can be grouped into central government, regional governments and state owned enterprises. Regional governments and state owned enterprises have their own act for tendering and contracting, namely 'Regional Finance Act' and 'Finance Act for State Owned Enterprises' respectively. However, on many of the issues they refer to the 'National Contract Act'. In addition, 'Procurement Act' states that projects above certain scale and all of the turn-key projects and alternative biddings must go through the Central Procurement Agency. Therefore, the basic framework for tendering and contracting can be found in the National Contract Act.

- **Contract Amount by Ordering Agency(1998, trillion won)**

Ordering agency	Central Gov't	Regional Gov't	Public Agency	Private Sector	Total
Contract Amount	7.7	11.2	10.7	17.5	47.1
Share(%)	16.3	23.7	22.7	37.3	100.0

Source: Contractors Association of Korea

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Public entity must not only abide by the internal 'Procurement Act' but also follow the stricter (in terms of international notification, foreign participation etc) 'Government Procurement Agreement' of WTO for certain scope of procurements. According to the Agreement, every member country must open its procurement procedure to all other member countries. Without an exception, Korea must also carry out international bidding for procurements of all construction facilities above certain thresholds. For instance, all construction works valued at more than 5 million SDR (1 SDR is about 1,500 won), if ordered by central governments and agencies, should be contracted out in an international bidding procedure. Similarly, all construction works of local governments and government-financed agencies should take similar steps if valued at above 15 million SDR.

2.2 Types of Tendering and Typical Procedure

2.2.1 Overview of Tendering System of Public Procurements

The standard method of obtaining tender is to advertise an invitation to contractors to tender for the government work. Advertisements are made through mass-media, including newspapers and government newsletters. This is known as open tendering. This method brings in any contractors who care to bid; amongst whom there could be contractors the orderer may feel less trustworthy. Under the system of open tendering the lowest tender will be chosen regardless of quality and performance. Furthermore, open tendering tends to lead to a wasteful multiplication of tenderings, the cost of which, in the long run, is born by the clients.

Common practice is to modify the procedure and to invite tenders only from a selection of firms that meet the minimum qualification standards and also who are acceptable to the client (e.g., prequalification system, pre-determined eligible list). While this method reduces the cost of tendering to the industry and ensures acceptable tenders, it is subject to certain disadvantages. Above of all, the number of bids may be reduced and this could raise the overall price. Also where the contractors are limited in this way it will be more difficult for new firms to enter the market. Moreover, when the approved list of contractors is very limited, the contractors will tend to behave as oligopolists and collude or form "bid-rigging cartels" by allocating businesses among members in rotation. A low bidder gets the business with an artificially inflated price while the rest submit even higher bids.

A lot of debates went on to rectify these problems at the governmental level, but a proper

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method of tendering, acceptable to all the parties involved, has not yet been worked out. Historically, the tendering system fluctuated from competitive bidding to various forms of restricted bidding.

2.2.2 Current Tendering System

(1) Company Capability Evaluation System

Previously we had an evaluation system that sets upper limit on the size of a project a contractor can contract. The limit is calculated based on past contract amount, capital size and financial soundness for all general and specialty contractors. It was a mandatory regulation affecting both the public and private sectors.

The system was improved recently such that qualitative performance of a contractor is taken into consideration and obligatory nature of the evaluation is dropped. The factors of evaluation are broadened to measures of technical ability, quality achievement, environment and safety observance, etc. It is computed by the authority in charge of the construction registration for all general contractors and some specialty contractors. The result is announced to the public and is used as a guideline and information in selecting suitable contractors.

(2) Four Major Types of Tendering Format

There are four types of tendering format: open, limited, selective, and negotiation. First three are competitive in nature. Public sector follows strict rules according to contract related laws in choosing tendering method and following processes. It provides a standard guideline for the private sector.

Open tendering, as the term suggests, allows all contractors with relevant registrations and minimum qualification to compete for the order. It is used for small projects. Limited tendering is a modified form of open tendering. It is open to all with pre-notified qualifications. Qualification differs from projects, but generally the criteria of past experience, possession of special technical ability or equipments, and certain level of company evaluation are used. Limited tendering is usually used for large projects.

Selective tendering is used when because of the nature of the projects there are less than 10 eligible contractors, the project is so small such that the cost of open competition is not rationalized, or giving preferential treatment to outstanding small

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and medium sized firms is appropriate, etc. The selection process must be fair and transparent based on construction and technical ability or equipments. Prequalified or registered list of contractors can be used. At least five must be selected and minimum of two must participate in the bidding.

Negotiation is used only under exceptional circumstances. Natural disaster, national security, contracts between public sectors, ongoing projects where contracting with current contractor is overwhelmingly favorable, or projects of less than 100 million won are some of the cases where negotiation is adopted. To win a contract in the case of negotiation, the bidding price must be above the undisclosed budget amount predetermined by the ordering party.

• Contract amount by tendering method and ordering entity(1998)

	Public	Private	Sum
Open	6.4* ¹ (6,638)* ²	1.6(1,061)	8.0(7,699)
Limited	18.9(12,929)	0.8(505)	19.8(13,434)
Selective	1.0(1,004)	3.2(1,037)	4.1(2,041)
Negotiation	3.4(12,309)	11.8(5,468)	15.2(17,777)
Sum	29.6(32,880)	17.4(8,071)	47.1(40,951)

*1 Trillion won

*2 Number of contracts

Source: Statistics Yearbook of Construction Industry, Contractors Association of Korea

Public sector makes more use of competitive tender than private sector and for larger projects limited and selective tendering method is adopted. Private sector favors selective tendering or negotiation even for larger projects because of its simplicity. As for the tendering process and contract form, private sector follows the practice used in the public sector.

2.2.3 Standards for Determining the Winner

In typical tenders, the lowest bidding price is selected as the winner. However, to avoid the vicious cycle of dumping and shoddy construction work, a bounded lowest bidding system has been used at times. A bounded lowest bidding system takes the form of a winning bid being the lowest bid among bids above 80%(or 85% etc) of the government pre-calculated cost of a project or the nearest bid to the average of all bidding figures.

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In 1995 a new system of qualification test has been introduced to complement the lowest bidding. Using a qualification formula that combines construction capacity and bidding price, bids are evaluated from the lowest to choose a winning bid that passes a certain level of qualification score. If the weight of bidding price is large in the formula, it in fact increases the lower boundary of the winning bid price. Construction works above 10 billion won used qualification test while rest of the projects adopted bounded lowest bidding system. Recently, the usage of qualification test increased over the years and now covers almost all government construction works. For smaller projects the weight given to the bidding price is maintained at a higher level so that small and medium contractors can enjoy higher lower boundary for bidding price.

Recently, the government announced that in principle it would gradually go back to the lowest bidding system. Starting from 2001, lowest bidding will win contract for construction works above 100 billion won. Gradually the coverage will be extended to other projects, the speed of which will depend on the successful establishment of supervision and surety bonding system. We have yet to develop a lowest bidding system where price competition leads to innovation and progress.

For certain types of projects greater than 10 billion won, prequalification method is used. Among the qualified competitors the lowest bidder may be selected as the winner, or depending on the technical nature of the project, two stage selection process where technical ability is considered with as much weight as price is used in deciding the winning bid.

As previously explained, Korea became a member of the Government Procurement Agreement(GPA) in 1996 and thus, for the government projects covered by the GPA, special act has been enacted to observe the international agreement. For projects larger than 5 million SDR(around 7.5 billion won) for the central government and 15 million SDR(around 22.5 billion won) for local governments and state owned enterprises, tendering process and winner selection method strictly follow the GPA code. Also construction related services in excess of 130 thousand SDR(around 0.2 billion won) for the central government and 200 thousand SDR(around 0.3 billion won) for regional governments must also follow the tendering process and winner selection method of the GPA code. Procurement of construction related services of the state owned enterprises is exempted from the application of the GPA code.

2.3 Contract and Guarantee

2.3.1 Characteristics of the Contract Format

In Korea, the firm-fixed price contract method is often used. The orderer and the construction firm contract on a total fixed price or unit fixed price. Contracts are awarded primarily on the basis of total price, but unit price is also considered important, because it provides a basis for adjustment. For certain cases, for instance price inflation or design change, price may be adjusted as indicated in the escalation clause of the agreement.

Other than the fixed-price contracts, there are the cost reimbursement contracts. The total expenditure on all inputs such as labor and materials, together with a fee to cover overheads and profit, are paid to contractors. Cost plus fee method sometimes used in other countries is very rarely used in Korea. However, the value engineering method is accepted for certain cases. In the tendering stage, alternative design bidding is sometimes allowed giving the advantage of the cost saving to the bidder. Also during the construction period, use of cost saving implementation method is encouraged by giving incentives to the contractor.

There are other types of contracts which do not entail competitive bidding; for example, negotiated contracts and serial contracting. The former type of contract as explained before is frequently used when there is only one firm capable of performing the given work satisfactorily or when there is not enough time to go through the competitive bidding. Serial contracting can take place when a firm negotiates further contracts for the same type of construction with a successful completion of the previous contract. These type of contracts are used under restrictive conditions as stated in the procurement act.

Contracting can also be classified in terms of the responsibility and the work coverage of the firm. For example, one can enter the construction-only-contracting whereby a firm will engage in only the construction works. More comprehensive contract in terms of the work coverage is the design-build-finance-and-operate contract, also known as BOT. As a rule, design and building(engineering and civil works) are done separately in Korea. However, for certain projects larger than 100 billion won, turn-key method can be adopted to enhance the synergy effect between design and construction. Even in such cases, joint participation between design and construction firms are recommended rather than having any one company entering the bid alone. In 1999, of 211 cases of larger than 10 billion won projects, 81% have been contracted out separately, 8% in

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turn-key fashion, and 1% by alternative bidding.

The construction management format, an advanced form of the turn-key type, has just been introduced into Korea and is still in its incipient stage. There are a couple of cases where foreign firms or "key personnels" are hired to assume construction management. For example, Bechtel Corp. was asked to take charge of the Seoul-Pusan high-speed train construction management. It is anticipated that professional construction managers (CM) will be extensively employed in the near future as construction works become more sophisticated and technology-intensive. Markets for construction management and consulting services will expand rapidly as the government emphasizes not only the quality of construction product, but also the safety of the construction sites. The market for engineering consulting and supervision has already been open to foreigners.

2.3.2 Subcontracting

The construction industry depends heavily on subcontractors in its provision of construction services. This also has mitigating effects on the industry's tendency for high concentration. The dependency on subcontractors is ever-increasing now as construction works vary widely and demand specialized skills and know-hows and also as single projects get larger in magnitude. The increase in the number of specialty contractors reflects this trend.

The amount of contract awarded to specialty contractors jumped 61 times during the 20 year period from 521 billion won in 1980 to 31.6 trillion won in 1998, whereas that of the general contractors was an increase of 16 times from 2,973 billion to 47 trillion won during the same period as shown in the table below.

• Contract amount by contract method and contractor type

	1980* ¹	1990	1998
Specialty contractor's contract amount	520.5	8,072.8	31,569.9
As original contractor	233.4	3,557.6	9,066.6
As subcontractor(B)	287.1	4,515.2	22,503.3
General contractor's contract amount(A)	2,972.8	26,376.5	47,079.9
Ratio: B/A(%)	9.7	17.1	47.8

*1 billion won

*2 Number of contracts

Source: Statistics Yearbook of Construction Industry, Contractors Association of Korea, Specialty Contractors Association of Korea

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Consequently the ratio of specialty contracts to the general contracts in terms of contractual volume increased from 17.5 percent in 1980 to 67.1 percent in 1998. This clearly suggests the growing importance of the specialty contractors. In addition, the subcontract portion of the total contract for specialty contractors is being regarded as more and more important as general contractors tend to subcontract higher share of their contract amount.

We used to have a regulation that sets the minimum share on total contract amount that must go to the subcontractor to protect the smaller specialty contractors. Instead, we are now reviewing to introduce a system that stipulates the minimum share on total contract amount that must be carried out by the original contractor to assure accountability and quality of work. Subcontractors are also protected from unfairly low price since subcontract with value below 82% of planned cost must go through a reviewing process by the orderer. If found wrongful in the review, changing of the subcontract can be ordered.

2.3.3 Required Bonds and Insurance

According to the National Contract Act, a contractor must post bid bond, either contract bond or performance bond as required, forward payment bond, defect liability bond at various stages of construction as shown in the figure below.

- Summary of construction bonding system

Tendering announcement		
Bidding		Bid bond (5% of the bidding amount)
Contract		Contract bond(10% of contract amount) Performance bond(30% of contract amount)
Forward payment		Forward payment bond (amount of forward payment plus interest)
Completion		Defect liability bond (differs according to construction types)
Final payment		

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In the case of insurance, the Act states that when deemed necessary the orderer can request liability insurance from the contactor. Presidential decree further states that major structures in excess of 10 billion won in contract value must have insurance including third party liability. The expense for the insurance is reflected in the cost estimation.

2.4 Dispute Settlement Process

During the construction works, entities involved often face unforeseen events such as changes in engineering condition, price escalation, or force majeure that lead to disputes and claims. It is highly recommendable that these disputes be resolved by mutual agreement, but they may end in the court causing large monetary and time cost. Therefore, for disputes related construction works that usually require quick and efficient solution, less costly alternative dispute settlement processes are recommended. The Framework Act, Subcontract Act, National Procurement Act outline such measures.

2.4.1 Dispute Settlement Mechanisms

Mutual consent is possible when through consultation between parties in conflict, mutually acceptable solution is found. This mechanism preserves the base for future cooperation and leaves least side effects from the conflict. It is the least costly and most recommendable dispute settlement method. However, the success of the process depends on the seriousness of the conflict and degree of mutual trust. Usually, many disputes end up with other forms of settlement.

When parties involved in the dispute cannot agree on a solution, third party(a person or an institution) comes in to mediate. If a mutually acceptable condition can be found it is reflected in the mediation contract. This has the flexibility that the legal suit lacks and since the outcome is accepted by both parties voluntarily it is easier to be implemented.

Before a dispute goes to the court it may seek the help of an independent expert arbitrator by mutual agreement. The process is less rigid and atmosphere also less hostile. The arbitration decision has obligatory power over the parties involved.

As a final resort, dispute can be settled in the court. Due process as any other litigation decision by court is observed. Even though a final decisive verdict can be obtained

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from the court, it is a very time consuming and costly process. In addition, the process often leaves animosity such that it is difficult to expect cooperation afterwards. It is best to avoid litigation if possible for both parties.

2.4.2 Dispute Settlement Organizations

Construction Dispute Settlement Committee is established under the Framework Act. It is an ad hoc committee that deals with all disputes arising in various stages(design, implementation, supervision) of construction, disputes between orderer and contractor, contractor and third party, contractor and subcontractor, etc., that are not covered by other Acts. Mediation begins when any one of the parties involved makes a formal request through the Committee. The Committee has central and regional presence and it has the power to repudiate or terminate mediation. When both parties accept the mediation scheme, it is deemed as an agreement.

Subcontract Act mandates the establishment of a Subcontract Dispute Settlement Committee in the Contractor's Association. The Committee must be composed of representatives from contractor, subcontractor and also some neutral experts. The Committee acts on the request of the Fair Trade Commission or both parties involved. It has the power to do independent fact finding research, ask for presentation in person or submit necessary documentation. If a decision is reached by the Committee, it has the same enforcing power as that of the Fair Trade Commission.

If the actions taken by the public orderer on claims made with regards to international bidding(coverage, eligibility, project announcement, awarding etc.) is not satisfactory one can ask the International Contract Dispute Committee for dispute settlement. When needed it can order the disputed public procurement process to stop until the matter is settled. If there is no further argument raised within 15 days of its decision it is deemed as a judicial settlement.

Commercial Arbitration Institute was established in 1966 as a corporate judicial body to solely deal with private contractual dispute settlement. By contractual clause or mutually agreed request the Institute can step in to arbitrate disputes. The Institute may attempt mediation before entering arbitration, which is done through private hearings. The result of the arbitration by the Institute must be accepted by the both parties.