

14179  
MAY 1988**FILE COPY**

## The Korean Construction Industry as an Exporter of Services

Sooyong Kim

---

*This article analyzes the experience of the overseas construction industry in the Republic of Korea in the 1970s and 1980s, emphasizing the factors that made Korean construction firms competitive in the world market. Korean construction exports to the Middle East and the roles of Korean workers, entrepreneurs, and the government are examined. Recent erosion of Korea's competitiveness in labor-intensive construction in the Middle East is discussed in relation to the need to develop expertise in design and engineering projects and to increase access to construction markets in developed countries through bilateral or multilateral trade negotiations. The importance of the issue of labor movement in the current Uruguay Round negotiations in services trade is emphasized.*

---

The oil-exporting countries of the Middle East have been the principal markets for the exports of construction and engineering services of developed countries since the mid-1970s. The revenues from oil exports and the ambitious development plans of the oil-exporting countries made the Middle East a new competing ground for top international construction firms.

Korean construction firms, with little experience in foreign markets, entered the Middle East market in 1973, and by 1980 the Republic of Korea had become the second largest exporter of construction services in the world in terms of new orders received.<sup>1</sup> In 1981 new foreign orders received by Korean firms reached a peak of \$13,681 million, over 92 percent of which were from the Middle East. (All dollar amounts in the text and tables are U.S. dollars.) The foreign exchange earned by Korean firms and Korean workers during the

1. Exports of construction services are expressed in the text and tables in terms of the value of new contracts awarded during given periods. These values are used because of the difficulty of calculating the value of construction work done during the periods or the value of services net of material costs.

The author is professor of economics at Sogang University, Seoul, Republic of Korea. An earlier version of this article was presented at the World Bank Conference on Developing Countries' Interests and International Transactions in Services, Washington, D.C., July 15 and 16, 1987. The author benefited from discussions with conference participants and is particularly grateful to Brian Hindley for many detailed comments on previous versions of this article. Three anonymous referees also provided helpful comments.

©1988 The International Bank for Reconstruction and Development / THE WORLD BANK.

**FILE COPY**

1970s and the early 1980s contributed significantly to the Korean economy by easing the pains of the restructuring that followed the two oil shocks.

The decline in oil prices and the corresponding decline in construction expenditures of the Middle East countries since 1983 have rapidly reduced the construction orders received by Korean firms. Nevertheless, overseas construction remains Korea's most important service export. The rise (and fall) in Korean overseas construction poses interesting questions. In light of the increasing emphasis on international trade in services, this article examines the experience of the Korean construction industry in the world market, with an emphasis on the factors that made the Korean firms competitive. The article assesses the current problems and future prospects of Korean firms in overseas construction, especially the possibilities for expanding exports of Korean construction services to developed countries.

### I. A BRIEF HISTORY OF PERFORMANCE

In September 1965, the Hyundai Construction Company of Korea was awarded a \$5.2 million contract for highway construction in Thailand, financed by loans from the International Bank for Reconstruction and Development (IBRD). This was the first time a Korean construction firm had been awarded a contract in a foreign country. In the nine-year period from 1965 to 1973, the beginning phase of Korea's overseas construction, Korean construction firms won contracts in foreign countries totaling \$423 million (see table 1). The bulk of these contracts (71 percent) was from Southeast Asian countries. By the end of 1973, Korean construction firms had contracts in twenty-six foreign countries or territories.

Korea's construction exports surged after the oil shock in 1973 and the sudden emergence of a huge construction market in the Middle East. The first Korean firm to enter the Middle East market was Samwhan Enterprise Company, which in December 1973 was awarded a \$24.1 million contract to build a highway in Saudi Arabia.<sup>2</sup> This opened a new frontier for Korean construction contractors, who were looking for new foreign markets after the decline of the construction market in South Vietnam in the early 1970s.

In 1974, seven Korean firms won new contracts in the Middle East totaling \$89 million; in 1975, the figures rose to twenty firms and \$751 million. As table 1 shows, the growth of Korea's construction exports to the Middle East was phenomenal by any standard. Just five years after the first contract, Korean firms' share of the Middle East market reached 25 percent.<sup>3</sup>

2. Samwhan's effort to enter the Middle East market actually began in 1972, before the first oil shock, and the highway project was the fourth that Samwhan had bid for in Saudi Arabia. In the first two bids, Samwhan was the lowest bidder but did not win the contracts. (See Samwhan Enterprise Co. 1979, pp. 494-501.)

3. New contracts in 1978 amounted to \$7,982 million, whereas the estimated total market size was

Table 1. *Korean Construction Exports, 1965–86*  
(new contracts awarded, in millions of dollars)

Year	Middle East	Other areas	Total	Middle East as percentage of total
1965	—	5.4	5.4	—
1966	—	5.6	5.6	—
1967	—	15.7	15.6	—
1968	—	20.6	20.6	—
1969	—	14.4	14.4	—
1970	—	48.0	48.0	—
1971	—	55.7	55.7	—
1972	—	83.2	83.2	—
1973	24.1	150.2	174.3	13.8
1974	88.8	171.8	260.6	34.1
1975	751.2	63.6	814.8	92.2
1976	2,429.1	72.6	2,501.7	97.1
1977	3,387.0	129.2	3,516.2	96.3
1978	7,982.4	162.6	8,145.0	98.0
1979	5,958.4	392.9	6,351.3	93.8
1980	7,831.0	423.4	8,259.4	94.8
1981	12,674.2	1,006.8	13,681.0	92.6
1982	11,391.8	1,991.6	13,383.4	85.1
1983	9,023.3	1,420.6	10,443.9	86.4
1984	5,910.5	591.9	6,502.4	90.9
1985	4,285.3	405.6	4,690.9	91.4
1986	1,241.6	997.5	2,239.1	55.5

—None.

Source: Republic of Korea, Ministry of Construction, *Construction Exports*, various issues.

Korea's construction exports reached a peak of \$13,681 million in 1981 but have declined continuously since then. New contracts received in 1986 were only 16 percent of the 1981 figure. The rapid decline was due largely to the decline in construction activities in the Middle East, which constituted by far the largest foreign market for Korean construction firms, averaging 90 percent of construction exports during the 1975–86 period.

Construction exports for the major exporting countries in terms of new contracts awarded during 1981–85 are shown in table 2.<sup>4</sup> The table clearly shows that Korea is the only major construction service exporter whose market share has declined steadily and substantially in recent years—from about 11 percent during 1981–83 to less than 6 percent in 1985. Although 1986 figures are not available, Korea's share is certain to be lower than that in 1985 because the value of Korea's new contracts in 1986 was less than half that in 1985.

\$31,752 million. (For details of the estimation, see Overseas Construction Association of Korea 1985, pp. 12–15, 32–37.)

4. These data are from the annual surveys of the top 250 international contractors conducted by the *Engineering News Record*; the data for Korea differ from those in table 1, which are based on Ministry of Construction reports.

Table 2. *Construction Exports of Major Exporting Countries, 1981-85*  
(new contracts awarded, in billions of dollars)

Country	1981		1982		1983		1984		1985	
	Dollars	Percent								
United States	44.1	(33.9)	44.9	(36.5)	29.4	(31.4)	30.7	(38.1)	28.2	(34.6)
Korea	14.3	(11.0)	13.8	(11.2)	10.4	(11.1)	6.6	(8.2)	4.8	(5.8)
Japan	8.2	(6.3)	9.3	(7.6)	8.7	(9.3)	7.3	(9.1)	11.6	(14.3)
France	12.5	(9.6)	11.4	(9.3)	10.0	(10.7)	5.3	(6.6)	6.7	(8.2)
Fed. Rep. of										
Germany	10.0	(7.7)	9.5	(7.7)	5.4	(5.8)	4.8	(6.0)	5.4	(6.6)
Italy	8.2	(6.3)	7.8	(6.3)	7.2	(7.7)	6.8	(8.4)	8.7	(10.6)
United Kingdom	7.9	(6.1)	7.5	(6.1)	6.4	(6.8)	5.6	(7.0)	5.6	(6.9)
Others	24.7	(19.0)	18.9	(15.3)	16.1	(17.2)	13.4	(16.6)	10.6	(13.0)
Total	129.9	(100.0)	123.1	(100.0)	93.6	(100.0)	80.5	(100.0)	81.6	(100.0)

Note: Billion is 1,000 million. Data for Korea differ from those in table 1, which are based on Korean Ministry of Construction reports.

Source: *Engineering News Record*, various issues.

In the Middle East market, construction firms from developed countries have recruited local workers or temporary migrants from third countries to work on their construction projects, whereas developing countries (mostly Asian countries) have supplied labor directly to the market. Korea has been the only major exporter of construction services to bring its own construction workers to the site, an important factor in explaining the performance of Korean overseas construction.

## II. ECONOMIC EFFECTS

Foreign exchange earnings have been an important benefit of overseas construction. As shown in table 3, annual foreign exchange earnings<sup>5</sup> from Korean overseas construction have come mostly from remittances from Korean workers employed abroad by Korean overseas construction firms.<sup>6</sup> Profits of the Korean firms are included in the earnings, but exact amounts are not available because of the long duration of most overseas construction projects and the difficulty

5. These are the differences between the annual receipts and annual payments of foreign exchange made through overseas construction, as reported in the invisible trade balance statistics. Although not included in the figures, the earnings from the complementary exports of Korean construction materials and equipment during the period totaled \$2,260 million (*Overseas Construction Association of Korea* 1986, p. 6).

6. Not all remittances reported in table 3 were made by Korean employees of Korean overseas construction firms. Although the proportions were small, some part of the remittances was from non-construction workers (mostly seamen) and construction workers employed by non-Korean firms (very small in number). As an example of the relative weights, at the end of 1982, the year of the largest remittances, of the 221,023 Koreans employed abroad, 171,170 were employees of Korean construction firms and 7,737 were employed by foreign construction firms in the Middle East.

Table 3. *Foreign Exchange Earnings of Korean Overseas Construction, 1979–86*

(millions of dollars)

Year	Foreign exchange earnings <sup>a</sup> (1)	Remittances by workers (2)	Goods trade deficits <sup>b</sup> (3)	(1) (3)	(2) (1)
1979	1,399	1,158	5,283	27	83
1980	1,451	1,292	4,787	30	89
1981	1,864	1,673	4,878	38	90
1982	2,256	1,939	2,397	94	86
1983	1,740	1,663	1,747	100	96
1984	1,646	1,490	1,387	119	91
1985	771	1,241	852	90	161
1986	459	1,077	1,925 <sup>c</sup>	—	235

—Not applicable.

a. Foreign exchange receipts from overseas construction less foreign exchange payments for overseas construction.

b. Customs clearance base.

c. Surplus.

Sources: Republic of Korea: Ministry of Finance, *Fiscal and Monetary Statistics*, various issues; Ministry of Labor, internal data; Economic Planning Board, *Major Statistics of Korean Economy*, 1986.

of cost calculation. According to one estimation by the Overseas Construction Association of Korea, profits from the \$17.8 billion in construction works completed by the end of 1983 were \$380 million, indicating an average profit rate of 2.1 percent (*MaeKyung Weekly*, May 23, 1985, p. 55). The consensus is that profit rates in overseas construction have fallen in recent years.

Whatever the size of the individual components, the total foreign exchange earnings made available by overseas construction contributed greatly to an easing of balance of payments difficulties over the years. The total earnings of \$11,127 million during 1979–85 were equivalent to more than 50 percent of Korea's commodity trade deficits during the same period (see table 3). The resultant increased capacity to import capital goods and raw materials must have contributed to the rapid growth of the Korean economy. This contribution can be seen more directly by comparing annual foreign exchange earnings with gross national product (GNP). The ratio reached a peak of 3.3 percent in 1982 but dropped to 0.5 percent in 1986. If the total contribution to GNP is taken to include the domestic value added induced by the foreign exchange earnings as well, then the contribution ratios would have been even higher.<sup>7</sup>

Overseas construction also had a significant effect on employment. From the beginning, all Korean exporters of construction services to the Middle East

7. Rhee (1987, pp. 6–7), for example, estimates a ratio of 6.8 percent for 1982. But this must be an overestimation in the general equilibrium context, because the same estimation for domestic construction—or any other industry, for that matter—yields sectoral contributions totaling much more than the actual GNP.

took Korean workers with them. Both the shortage of local workers in the Middle East and the high productivity of Korean workers relative to wages encouraged construction firms to recruit Korean workers. From 1979 through 1984, the end-of-year stock of Korean workers employed abroad by Korean construction firms each year exceeded 100,000 (see table 4). From a peak of 172,000 Korean workers in 1982, the number declined continuously, reaching 59,000 in 1986. In the heyday of Korean overseas construction, Korean construction works in foreign countries accounted for 20 percent of construction industry employment.

### III. INSTITUTIONAL AND POLICY ASPECTS

The reconstruction work after the Korean War and the presence of U.S. military forces in Korea contributed to the growth of the Korean construction industry during the 1950s and early 1960s. U.S. military projects provided opportunities for Korean firms not only to earn handsome profits but also to learn about international contracts. The amount of U.S. military construction work awarded to Korean firms declined after 1965 due to the "Buy American" policy and U.S. involvement in the Vietnam War.

The dispatch of Korean troops to South Vietnam in 1965 and 1966 presented an opportunity for Korean construction firms to participate in military construction projects abroad. South Vietnam marked the first case in which Korean workers and companies went abroad in large numbers and earned substantial amounts of money. This experience familiarized Korean workers with the opportunities for earning much higher wages abroad than they could in Korea.

The South Vietnam boom for Korean firms subsided completely by 1972

Table 4. *Contribution of Korean Overseas Construction to Employment, 1979-86*

(thousands of workers)

Year	Employment in overseas construction (1)	Employment in nonfarm sectors <sup>a</sup> (2)	Employment in construction (3)	(1) (2)	(1) (3)
1979	106	8,777	836	1.2	12.7
1980	135	9,029	843	1.5	16.0
1981	166	9,222	876	1.8	18.9
1982	172	9,767	829	1.8	20.7
1983	164	10,190	817	1.6	20.1
1984	131	10,515	905	1.2	14.5
1985	98	11,237	911	0.8	10.8
1986	59	11,843	889	0.5	6.6

Note: Employment figures for nonfarm and construction sectors are averages during the year, whereas employment figures for overseas construction figures are end-of-year figures.

a. Excludes those employed in agriculture, forestry, and fishing.

Sources: Overseas Construction Association of Korea (1986) and internal data.

(see Kim 1982 for details of the South Vietnam case). Although Korean construction firms expanded to markets such as Guam, Okinawa, and Alaska, these markets were not large enough to replace South Vietnam or to satisfy the desires of Korean firms and workers to operate outside the narrow domestic markets. Thus, after the first oil shock, the vast new construction markets in the Middle East became the natural, eagerly pursued targets for Korean construction firms. The Middle East market was ideal for Korean firms because of its size and virtual lack of restrictions on bringing Korean workers to the construction sites.

In December 1975, the government introduced the Overseas Construction Promotion Act (which became effective April 1, 1976) to support and control the Korean construction industry. In January 1976, the government established the Middle East Economic Cooperation Commission. The commission, a top-level economic policy decisionmaking body comprising the prime minister and relevant cabinet officials, had under it an interministerial task force to devise and coordinate the policies of various ministries. Also in 1976, a new bureau was added to the Ministry of Construction to deal solely with overseas construction. A government-supported research institute was established in the same year to promote studies of the Middle East economies. In May 1977, the Overseas Construction Association of Korea (OCAK) was established by government initiative to promote overseas construction activities and to provide for self-regulation of the industry.

In addition to these new major bodies to support or regulate overseas construction, the government established new rules on the migration of construction workers and labor management in foreign countries. The government designed a standard labor contract to be used by all Korean firms employing Korean construction workers overseas. In force since April 1977, its purpose is to prevent disputes between workers and employers on wages or working conditions in foreign countries. The contract specifies minimum wages, contract period, working hours, leave, travel fares, welfare facilities, casualty compensation, and worker responsibilities.

Among the new policy measures introduced by the government, those with the greatest impact concerned tax and financial incentives for overseas construction firms. The Overseas Construction Promotion Act states that exports of construction services and exports of goods should receive equal treatment in terms of government support. As Korea had a highly effective system of export promotion in the 1970s, this implied considerable help and lack of discrimination against construction services. Exporters received preferential treatment in bank credit and interest rates. To cover future losses, exporters were allowed to deduct from taxable income 1 percent of foreign exchange revenues. The same deduction was also available for the costs of seeking new export opportunities.

The tax incentives for overseas construction, however, were even more favorable than the incentives for goods exports. There was a 50 percent reduction

of corporate income tax for income from overseas construction.<sup>8</sup> This direct tax support, however, was replaced by an indirect income deduction system in 1981. Under the new rule, overseas construction firms could deduct up to 2 percent of foreign exchange revenues from their taxable income (but only within the limit of 50 percent of the income from overseas construction). Construction firms were required to use this tax savings to balance past losses or to increase capital. Although originally planned to terminate at the end of 1986, the deduction system has been extended to 1991 because of the recent difficulties experienced by overseas construction firms. Other tax incentives include accelerated depreciation allowances for equipment directly used in overseas construction and an income tax reduction for workers employed abroad.

Probably the most important financial support for the overseas construction industry before the early 1980s was the granting of bid, performance, and advance payment bonds by a group of Korean banks. The value of contracts was increasing so fast that many construction firms were unable to provide sufficient collateral to get the bank guaranty required for the bonds. In response, the government in 1976 organized seven banking institutions to provide collectively the necessary guaranties for projects with contract values exceeding \$50 million. This collective guaranty system lasted until May 1982. By then, as a result of an emphasis on greater independence in bank management, individual banks were offering guaranties based on their own assessments.<sup>9</sup> Many other supporting policies were introduced in the late 1970s for overseas construction. Two of the more salient examples were the easing of foreign exchange regulations and the provision of overseas construction insurance.

A distinguishing characteristic of Korea's policies toward overseas construction has been the extensive government control in all phases of the business. The Overseas Construction Promotion Act deals more with government controls and intervention mechanisms than with support measures. For example, only firms with licenses for overseas construction from the minister of construction are allowed to operate abroad. Firms require permission from the minister of construction to bid on a contract for overseas construction. If more than two Korean firms plan to compete for a given project, the government can intervene to limit competition. For the same purpose, the government can also designate which firms can operate in a particular country or area. Firms planning to operate in a new foreign market must submit their bidding plans to the government.

Other controls, many of which are not legally specified, have also played important roles in the export of construction services to the Middle East. For instance, to increase the employment and earnings of Koreans, Korean firms

8. This tax incentive had been applied to all exports before the revision of export incentives in 1973.

9. Bank guaranties outstanding for overseas construction firms at the end of 1983 were about \$6.9 billion. Over three-quarters of this was for performance and advance payment bonds. The amount outstanding declined to \$5.7 billion by the end of 1985 (see Overseas Construction Association of Korea 1984, p. 120; 1986, p. 4).

have been advised to limit their employment of foreign workers. To minimize the leakage of foreign exchange earned by Korean workers, Korean construction firms were required to pay at least 80 percent of Korean workers' monthly wages in won in Korea. Labor attaches from the Ministry of Labor supervised labor relations and working conditions in Korean firms abroad.

#### IV. COMPETITIVENESS

In the international construction market, Korean firms have been especially competitive in labor-intensive construction projects, as demonstrated by the composition of Korean construction exports. During the ten-year period 1975–84, Korean firms won contracts in the Middle East worth a total of \$40.5 billion. About 85 percent of these contracts were for general building and civil engineering works (see table 5), all closely related to residential and infrastructure development. These projects are labor intensive and do not require the most sophisticated construction technologies.

At the other end of the construction market are projects that require special skills and advanced technologies, such as plant construction, electricity or communication facilities, and professional services in design, engineering, and construction management. For these types of projects, Korean firms' performance was less impressive. Although plant construction constituted about a third of the Middle East market, it accounted for less than 14 percent of the value of contracts received by Korean firms (see table 5). This means that Korea's revealed comparative advantage index, as measured in table 5, is only 43 for plant construction, whereas the indexes for building and civil engineering are

Table 5. *Revealed Comparative Advantage of Korean Overseas Construction Exports to the Middle East, 1975–84.*

(millions of dollars)

	Civil engineering	Building	Plant	Electricity/ communi- cation	Service	Total
Orders awarded in the Middle East	96,318	113,318	122,620	33,773	13,437	379,464
Share (percent) (1)	(25.4)	(29.9)	(32.3)	(8.9)	(3.5)	(100.0)
Orders received by Korean firms	16,685	17,535	5,603	570	83	40,476
Share (percent) (2)	(41.2)	(43.3)	(13.3)	(1.4)	(0.2)	(100.0)
Revealed comparative advantage index $\left(\frac{2}{1} \times 100\right)$	162	145	43	16	6	100

Note: The original source of the international contracts data is various issues of the *Middle East Economic Digest*; the values of Korean exports do not coincide with those in table 1.

Source: Overseas Construction Association of Korea (1985, tables II-14 and II-23).

145 and 162, respectively. The indexes for electricity and communication construction and for professional services are also very low.

The reason for the Korean firms' comparative advantage in labor-intensive projects is of course that Korean labor costs are much less than those of Korea's major competitors. A low labor cost can be decisive in determining cost competitiveness for labor-intensive projects. Differences in labor costs become important when construction firms can bring their own workers instead of hiring local workers, as in the case of the Middle East markets.

But Korea's advantage in low labor costs is not limited to construction workers. Labor costs for Korean overseas construction firms are lower at all levels than costs for firms in industrial countries—from supervisors and engineers to the firms' managers in Korea. This is one reason firms from industrial countries cannot fully compensate for their labor cost disadvantage by using third-country labor. In addition, Korean firms' competitiveness came not only from an efficient and productive work force relative to wages but also from the fact that an all-Korean work force brought harmony, good teamwork, and savings in labor management costs.

Korea's competitiveness based on a low-cost Korean work force has been weakened in the international construction market since the early 1980s. Two factors are primarily responsible: the rapid decline of the labor-intensive construction market in the Middle East and the rise of Korean labor costs relative to the cost of workers from other labor-exporting countries. Construction market statistics show that building and civil engineering contracts in the Middle East have declined over the years as many of the residential and infrastructure construction projects neared completion. At the same time, the number of low-wage workers, mostly from South or Southeast Asian countries, has increased rapidly in the Middle East since 1980 (see Demery 1986 and ESCAP 1987, p. 16, for annual figures).

The increased supply of low-cost labor in the Middle East raises an important issue for Korea's future construction exports. In most of the Asian and African countries in which Korean construction firms operate, there is a sufficient supply of cheap labor, and the use of local labor is more often required and strictly enforced than in the Middle East. Observing these developments in the world construction market, Korean firms and policymakers have tried to restructure Korean construction exports in order to increase their share of more technology-intensive exports such as feasibility studies, design, engineering services, construction management, and operations and maintenance.

So far, however, Korean firms have not been competitive in this area. Lacking the necessary technology, Korean firms have not been able to bid on certain projects or have been able to bid only on the parts of the project that did not require sophisticated engineering knowledge. In many cases, Korean firms were subcontractors of major firms from industrial countries.

That Korean firms are not as competitive in design and engineering is re-

flected in the types of projects for which the Korean firms have won contracts (see table 5). It is also reflected in surveys of top international design firms conducted by *Engineering News Record*: only 4 Korean firms were among the top 200 international design firms in 1985, with total foreign billings of only \$47 million, a 1.3 percent share (*Engineering News Record*, August 7, 1986).

Several efforts have been made to strengthen the design and engineering capabilities of Korean construction firms. The Korean government passed the Engineering Business Promotion Act in 1973 and offered tax incentives and domestic market protection to local design and engineering firms. Currently, the domestic market is protected by the prime contractor system, which limits the participation of foreign engineering firms. In 1983, the government supported the establishment of the Korea Institute of Construction Technology. And, by law, the minister of construction can recommend that construction firms with revenues over a certain level increase their expenditures for technology development.

Despite these efforts of the government and those of private firms, Korean construction firms have found it difficult to penetrate the "software" portion of the international construction market. Given the linkage between feasibility studies / design work and construction contracts, the weakness of Korean firms in engineering services diminishes their chances of winning construction contracts and limits Korean exports of construction materials and equipment.

Another weak area for Korean overseas construction firms is financing. Many developing-country importers of construction services ask contractors to finance the projects. It is believed that Japanese firms win more contracts in Asia than in other regions partly because the Japanese government concentrates its development grants and loans in Asian countries. Italy and France, along with Japan, are reported to be the leaders in contractor-financed projects (*Engineering News Record*, August 6, 1986). Unlike the firms from these countries, Korean firms lack the support of government aid programs and the ability to use the international financial market for low-cost financing. The Export-Import Bank of Korea offers long-term supplier credits, but the amount of available credit is quite low.

## V. PROSPECTS

Fierce competition, reduced government support, worsening payment schedules, and a shrinking construction market have forced many Korean construction firms to withdraw from the Middle East market during the last several years. The contraction of the world market and the erosion of Korean competitiveness in labor-intensive works were not recognized early enough to allow Korean firms and policymakers to adjust. Many Korean firms had to bid low just to stay in business. Low biddings, however, meant losses. At the end of 1986 and again in early 1987, the government adopted new measures to

rationalize the overseas construction industry, providing adjustment assistance to firms willing to withdraw from the overseas construction market and surrender their licenses for overseas construction.

Given that Korea is losing its competitiveness in labor-intensive work and has not yet gained sufficient competitiveness in skill-intensive or technology-intensive work, Korea's comparative advantage in the world construction market for some time in the future will be in medium-level technology projects. In these projects, Korean firms can beat both the low-wage, low-technology competitors from developing countries and the high-technology, high-wage competitors from industrial countries. A combination of medium-level technologies and medium-level labor costs can be very effective in winning contracts for building and civil engineering works in industrial countries. For this reason, Korean firms are trying hard to enter the U.S. and Japanese construction markets, but as yet they have had little success.

Korean firms began to focus on the U.S. market after the decline of the Middle East market. In 1985 and 1986, Korean firms won new contracts in the United States valued at \$49 million. But their market share among foreign firms operating in the United States was only 0.4 percent in 1985 (Choi 1986).

In Japan, Korean firms have not yet won a single construction contract, nor has any Korean firm yet incorporated a subsidiary in Japan, mainly because Japanese policies protect the domestic construction market. (Even U.S. firms did not win any contracts in Japan in 1985, whereas Japanese firms received \$2 billion in orders in the United States; *Asian Wall Street Journal*, December 9, 1986.)

The desire to penetrate the construction market in industrial countries is a major factor behind Korea's active participation in the Uruguay Round of multilateral trade negotiations. It is probable that the negotiations will result in the lowering of trade barriers to services among the industrial countries and some newly industrialized countries, but it is unlikely that most developing countries will open their service markets significantly to foreign competition. One way industrial countries could entice developing countries to open their service markets is to take advantage of the linkage between concessions on goods and concessions on services. Although most developing countries oppose this linkage, the industrial countries may offer "rollbacks and standstills" on goods of export interest to developing countries in return for access for services.

Because it is neither necessary nor desirable to produce domestically all the services that are consumed domestically, Korea could gain by opening at least some of its service markets, particularly if in so doing it could increase its access to foreign markets. Liberalizing all trade in goods but protecting all services will simply promote misallocation of resources. Korean construction firms, however, except perhaps those with overseas construction licenses, worry about the opening of the domestic construction market to foreign competition. Opponents of liberalization argue that the engineering sector is an infant indus-

try and that, with protection, it will become an export industry in the near future.

In the current negotiations on trade in services, Korea is especially interested in the issue of factor mobility, specifically the extent to which temporary movement of labor will be allowed into the industrial countries. As discussed earlier, the competitiveness of Korean exports of construction services to industrial countries is heavily dependent on the number of Koreans that Korean firms can bring in with them.

There is an argument that labor mobility should be separated from the negotiations on other forms of services because questions relating to visas and work permits are even more sensitive than pure trade matters. But as Grubel (1986) argues convincingly, free trade in goods and free movement of capital and people are essential for free trade in services. Thus it is difficult to see how the issue of temporary migration can be separated from that of the movement of capital. Moreover, as Bhagwati (1987) clearly explains, the concept of the "right to establish" cannot meaningfully or justifiably be circumscribed to exclude the inward mobility of foreign labor and its services.

Korean contractors and policymakers find it hard to accept the idea that only predominantly capital- or technology-intensive services should be included in the negotiations. For construction services, this narrow coverage means that only consulting and engineering services are included. Most construction services require that the provider of services go to the user. It is not possible to draw a line distinguishing the services of technology or capital from the services of labor.

## VI. CONCLUDING COMMENTS

The early successes of Korean overseas construction firms in the Middle East led to overexpansion into that region. Declining orders and increased competition from foreign firms and among Korean firms reduced both the level of operations of Korean firms and their profits. Many firms suffered losses, and the government intervened in order to rationalize the industry. The government's current policy seems to be to reorganize the industry so that only a limited number of financially healthy construction firms engage in foreign business, and to develop new markets, especially in the United States and Japan.

The Uruguay Round negotiations on trade in services are important to the Korean overseas construction industry, which many Koreans believe to be the service industry that can benefit most from increased access to foreign markets. The key factors that will determine the effects of the negotiations on the Korean overseas construction firms are whether developing countries also liberalize their imports of construction services and the extent to which industrial countries allow inflows of Korean construction labor.

Developing countries that have supplied construction workers to the Middle East over the years should be eager to find efficient uses in other countries for their large stocks of experienced and skilled construction workers, available at relatively low wages. The Korean experience shows the possibilities for construction firms from such countries, using their own workers, in the world market in labor-intensive, low-technology projects. The issue of labor movement in services trade negotiations is as important for these developing countries as it is for Korea.

#### REFERENCES

- Bhagwati, Jagdish. 1987. "Trade in Services and the Multilateral Trade Negotiations." *World Bank Economic Review* 1, no. 4: 549-69.
- Choi, J. Y. 1986. "The Environment of the U.S. Construction Market and the Strategy of the Korean Entries." *The Overseas Construction* (Seoul) 9 (November): 14-33.
- Demery, Lionel. 1986. "Asian Labor Migration: An Empirical Assessment." In Fred Arnold and N. M. Shah, eds., *Asian Labor Migration: Pipeline to the Middle East*. Boulder, Colo.: Westview.
- ESCAP (Economic and Social Commission for Asia and Pacific). 1987. *International Labor Migration and Remittances between the Developing ESCAP Countries and the Middle East: Trends, Issues, and Policies*. Bangkok, Thailand: United Nations.
- Economic Planning Board (Korea). N.d. *Major Statistics of Korean Economy*. Seoul. Various issues.
- Grubel, H. G. 1986. *There Is No Direct International Trade in Services, Only Indirect Trade through the Movement of People, Goods or Capital*. Fraser Institute Service Project Discussion Paper 86-3. Vancouver, Canada: Fraser Institute.
- Kim, Sooyong. 1982. *Contract Migration in the Republic of Korea*. International Migration for Employment Working Paper 4. Geneva: International Labour Organization.
- McGraw Hill. N.d. *Engineering News Record*. New York. Various issues.
- Ministry of Construction (Korea). N.d. *Construction Exports*. Seoul. Various issues.
- Ministry of Finance (Korea). N.d. *Fiscal and Monetary Statistics*. Seoul. Various issues.
- Overseas Construction Association of Korea. 1984. *The Non-government White Paper on Overseas Construction*. Seoul.
- . 1985. *Prospects of the Overseas Construction Orders and Contracts*. Seoul.
- . 1986. *The Present State and Prospects of Overseas Construction*. Seoul.
- Rhee, Hak-Yong. 1987. "Korea's Overseas Construction." Paper presented at the 16th Pacific Trade and Development Conference, Wellington, N.Z., January.
- Samwhan Enterprise Co. 1979. *Thirty-three Years of Samwhan*. Seoul.