

# BRIEF HISTORY OF KOREA'S OVERSEAS CONSTRUCTION: LESSONS AND FUTURE STRATEGY

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**ABSTRACT :** The history of Korea's overseas construction began in 1965, and the cumulative contract amount is about \$180 billion over the last 40 years. During the period, Korea's overseas construction industry has played an important role for economic development. However, it seems that the industry is in a sea of trouble. Overseas construction orders have declined due to various reasons such as companies losing confidence, limited financing, lack of competitiveness, and so on. This paper addresses the brief history of Korea's overseas construction industry and the problems that the industry is facing. Then it suggests a few measures for the improvement of the industry.

*Key words :* Overseas construction, Competitiveness for orders, Government policy

## 1. INTRODUCTION

The Korean construction industry has achieved overseas order totals worth US\$ 180 billion since it entered the Thai market in 1965, and gave an enormous boost to accelerate Korea's economic growth. In particular, it helped the nation get out of the two 'Oil Shocks' in the 1980s and was a driving force behind the economic development through financial provision, improving international payments, increasing the national income and job creations with its projects abroad.

Its foreign-exchange earnings between 1981 and 1991 was US\$ 12.6 billion, 62% of the national current account surplus of US\$ 20.3 billion in the same period. Also, its contract amount abroad in 1981 was US\$ 13.7 billion, 64.6% of the national goods export totals of US\$ 21.3 billion in the same year. With strong performance in the overseas construction like the above numbers show, Korea emerged as the world's second largest construction power following America in the 1980s. However, as the Middle East construction market began to shrink from the mid 80s, the industry's overseas orders plunged sharply. In 1988, its revenue recorded an all time low of US\$1.6 billion except for the early times. In 2003, the revenue accounted for only 1.9% of the total national goods exports, and Korea's overseas market share plummeted to 1.9%. This undulating trend was attributable to lack of countermeasures and strategies by both the construction industry and the government and to inefficient systems along with external causes.

I split this paper into two parts. First, I will review Korea's overseas construction history briefly by major periods and analyze its success and failure factors. Then, I will draw from the analysis its problems at hand and present solutions to them.

## 2. BRIEF HISTROY<sup>1)</sup>

As of December, 2004 the Korean construction industry won a total of 4,770 overseas orders valued at US\$ 185.4 billion since the Pattani-Narathiwat Highway Construction Project(US\$ 5.2 million) in Thailand in November,1965, and it is a matter of time that its revenue total will reach the US\$ 200 billion mark. If current trends continue, the revenue total in overseas construction is projected to come to US\$ 200 billion by the end of 2006, after reaching US\$ 100 billion in April, 1993. Figure 1 shows Korea's overseas construction order volume since 1975.

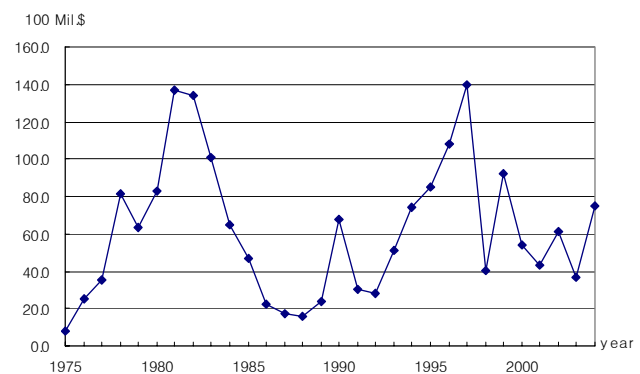


Figure 1. Korea's overseas construction orders

### 2.1 Pioneering Phase (1965~1974)

Between 1965 and 1974, a pioneering time of opening new markets, the industry's overseas construction was focused in Southeast Asia including Vietnam and expanded

<sup>1)</sup> Ministry of Construction and Transportation of Korea, Study on Overseas Construction Promotion Plans, 2004.

into other regions. During this period, Korean firms could open Southeast Asian markets thanks to their experience from military construction projects and construction projects using foreign loans at home, construction diplomacy efforts by the government and security of workforce. Also, they enjoyed military related construction bonanza in Vietnam due to Korea's participation in the Vietnam War. Many Korean builders used Vietnam as their base and expanded into adjoining regions to diversify their overseas markets. Afterwards, new markets continued to open to them from Alaska in North America to the Dominican Republic in Latin America. In 1973, Korea's overseas markets expanded into the world except for Europe with the winning of the first project in Saudi Arabia. On the other hand, as demand for construction declined after the Vietnam War ended, they tried to open new markets and eventually entered the Middle East.

At home, as the government drove the 'Economy Development Plan' starting 1962, infrastructure construction based on loan projects was actively conducted. Therefore this period can be dubbed a time of loan construction. Although these loan projects were carried out domestically, Korean firms applied their experience obtained from military projects for the successful delivery, upon which they could build up know-how to go global.

## 2.2 Expansion and Maturity amid Middle East Boom (1975~1983)

Korean contractors made quantitative expansion between 1975 and 1983 jumping on the back wagon of the Middle East boom. As oil producing countries in the Middle East racked in huge amount of foreign exchange due to the two 'Oil Shocks', they could develop their underdeveloped economy and social infrastructure. In particular, since these oil producers did not have sufficient technology for economic development and had no social infrastructure, there was an exploding demand for foreign workforce, technology and resources. The bullish Middle East market pushed Korean builders' overseas construction revenue to over US\$ 2.5 billion in 1976 alone and record high US\$ 13.7 billion in 1981. As a result, Korea jumped to No. 2 in the world's overseas construction revenue standing after the US in the early 80s. For the next 3 years since 1981, its year-on-year revenue was over US\$ 10 billion and the industry saw the advent of its booming era in overseas construction as its markets diversified throughout the globe.

During this period unlike before, the government recognized overseas construction as one of its strategic businesses and implemented governmental assistance policies for guiding and supporting the industry. For instance, the government enacted Overseas Construction Promotion Act (December, 1975), established Joint Payment Bond (December, 1975) and introduced tax reduction policy such as 50% corporate tax reduction for overseas construction. The overseas construction assistance system was further reinforced when The International Contractors Association of Korea was launched in January 1976 in order to protect overseas construction contractors and to help them perform their projects effectively. Table 1 shows overseas

construction status by regions between 1975 and 1983. In the nation, meanwhile, economic aftermath such as scant foreign exchange and inflation caused by the 1<sup>st</sup> 'Oil Shock' began to improve from 1975, and the economy entered a prosperous phase in 1977. Shortly after that, however, international oil prices soared on account of the 2<sup>nd</sup> oil shock in 1979. Currency volume increased significantly due to rising overseas construction revenue, and inflation recurred as excess investments were made in the heavy chemical industry. In the midst of these, the industry's labor costs in overseas construction shot up which caused its overseas construction competitiveness abroad to weaken since it was competing with lower labor costs of others.

**Table 1.** Overseas construction orders by regions

(Unit: Million)

Year	Asia	Pacific & America	Latin America	Africa	Mid. East	Total
1975	43	5	1	15	751	815
1976	35	17	14	7	2,429	2,502
1977	119	10	-	-	3,387	3,513
1978	91	11	36	25	7,982	8,145
1979	378	14	0	1	5,958	6,351
1980	409	4	0	15	7,831	8,259
1981	838	2	0	166	12,675	13,681
1982	1920	4	5	0	11,392	13,321
1983	979	9	3	130	9,023	10,144
계	4,812	76	59	359	61,428	66,734
%	7.2	0.1	0.1	0.5	92.1	100.0

## 2.3 Decline and Recession of Middle East Economy (1984~1992)

The Korean construction industry's overseas business was in recession between 1984 and 1992, and this period was considered its biggest crisis. Its overseas business, which was at its peak in 1981, began to decline sharply from 1984, and its revenue hit a record low of US\$ 1.6 billion in 1988 except for the early times of its history. The downturn in the revenue was mainly affected by structural changes of the Middle East which was the industry's core market. That is, oil producing countries made less money due to falling oil prices, and their demand for construction dropped sharply as their SOC projects neared completion. However, the industry's internal problems such as limited technologies, failure to find substitute markets, and soaring construction labor costs caused further decline in revenue in comparison to the overall downsizing of overseas markets.

Moreover, some Korean builders suffered financial shortages and eventually pulled back from overseas or went bankrupt because of drop in progress payments caused by falling revenue, delay in payments, payments with long-term bills or oil, and accumulation of outstanding payments due to their defective performance. Even though the industry's overseas revenue amounted to US\$ 6.8 billion in 1990 with the winning of the second phase project of Libya's 'Great

Man-made River, its year-on-year revenue during this period was just about US\$ 2 billion.

### 2.4 Jumping into Asia (1993~1997)

From 1993 until before the financial crisis in Southeast Asia in 1997, the industry got out of its long-term slump in overseas construction and had opportunities to leap once again after the Middle East boom. Its annual revenue stayed above US\$ 7 billion except for 1973 and the revenue was US\$ 10.8 billion in 1996, close to the highest level when it was at its peak in the early 80s. Especially, it made its all time high overseas construction revenue of US\$ 14 billion in 1997 when the financial crisis hit Southeast Asia. During this duration, Korean firms could succeed in diversifying their overseas markets and moved from the Middle East to

the decline of the Middle East market. These situations coincided with the domestic construction slump which caused many constructors to face liquidity crisis, court receivership, workout and bankruptcy.

Under these circumstances, Investment-development projects which were active in Southeast Asia disappeared almost completely, and the industry's order share dropped sharply as its international competitiveness in civil and architectural areas deteriorated. On the other hand, plant projects, mostly E/P/C Turnkey delivery, emerged into the mainstream as Korean contractors focused on profit-oriented marketing strategies. Besides, as economic recession of Asian markets and surge in oil prices continued, Korean firms once again moved their main operations base from Southeast Asia to the Middle East from 2001. At the same

**Table 2.** Proportion of investment development projects by regions ('93~'97)

(Unit: US\$ 100 Million,%)

Regions	Whole category(A)		Investment-development (B)		Contracted		Ratio (B/A, %)
	No. of orders	Amount	No. of orders	Amount	No. of orders	amount	
Asia	562	297.0 (64.7)	55	74.0	507	223.0	24.9
N. America. Pacific	75	30.6 (6.7)	43	19.7	32	10.9	64.4
Others	143	131.2 (28.6)	7	1.6	136	129.6	1.2

Asia (64.7% order share) as their main operations base. Also, They were involved in plant projects with high value added rather than the past's civil or architectural projects.

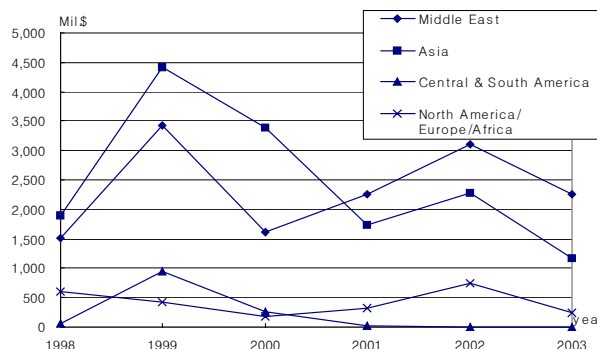
In the meantime, local firms improved their technology and new competitors, like China, entered overseas markets. Korean builders lost their price competitiveness, and as a result there was a rapid drop in contracts for large-scale civil and architectural projects which were their main business fields. However, this problem eased slightly as large and medium-sized Korean firms started investment-development projects. During this duration, projects of this kind amounted to US\$ 9.5 billion, which is 93% of the total amount of investment-development projects (US\$ 10.2 billion). Most of these projects were attributable to active private investments in Southeast Asia, and 80 % of them in terms of revenue were concentrated in that region. In North American and Pacific regions, 60% of the projects that Korean firms won were investment-development type. Table 2 shows the analysis of investment-development contracts between 1993 and 1997.

### 2.5 Adjustment after Financial Crisis(1998~2003)

Between 1998 and 2003 the industry went through an adjustment phase as Southeast Asia's foreign-exchange crisis and Korea's IMF bailout continued. Southeast Asian markets, Korea's main operations base, cooled rapidly and Korea's IMF bailout pushed down credit ratings of the nation and its financial institutions and companies. This setback triggered some difficulties in relation to bond issuance and raising of construction funds. Korean builders' marketing activities overseas also atrophied, and they faced another crisis after

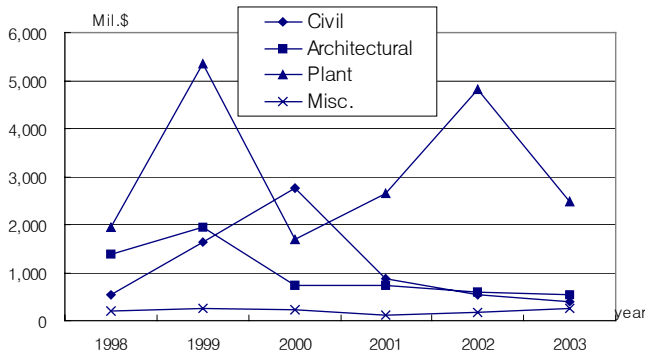
time, they tried to transform their pre-financial crisis business practices staying away from quantitative growth and turning to contracts based on profitability.

The revenue figures during this period show that Korean firms performed relatively well amid suffering and aftermath of the financial crisis compared to their performance during the decline of the Middle East economy. In 1998, shortly after the crisis, the revenue was US\$ 4.1 billion, US\$ 9.2 billion in 1999, thanks to their winning large-scale projects in the Middle East and Latin America, and a relatively good US\$ 5.4 billion in 2000. It is considered that these fairly good revenue accomplishments amid the business crisis were attributable to active support strategies by both the government and private aid organizations and the builders' efforts to go overseas in a bid to make up for their low domestic takings.



Sources: The International Contractors Association of Korea

**Figure 2.** Post-crisis orders by regions



Sources: The International Contractors Association of Korea

Figure 3. Post-crisis orders by discipline

### 3. PROBLEMS IN OVERSEAS CONSTRUCTION AND THEIR CAUSES

#### 3.1 Loss of Marketing Competitiveness

Korean builders' loss of competitiveness in overseas markets caused their overseas operations to sink more than anything else did. The year-on-year revenue totals of civil and architectural areas between 2001 and 2004 were merely US\$ 10~15 billion, only 10% of the US\$ 12.2 billion figure in the same fields in 1981 when their overseas operations were at their peak. Most of the recent orders are from the industrial construction area which indicates that the traditionally major business areas of civil and architectural are falling.

This situation, as explained earlier, has resulted from the builders' losing their marketing competitiveness and from their lagging cost, engineering or design and management abilities as well. As a result, they lose projects to local firms or Chinese firms with cheap costs for general construction, and even worse they are not fitted with advanced skills or management capabilities for high-tech construction. Furthermore, they are failing to come up with countermeasures or to pursue localization in order to overcome the current crisis.

Figures 4 and 5 illustrate the falling Korean construction in overseas markets. Figure 4 shows the ratio of the industry's international revenue to the total of its international and domestic revenues, and it is clearly seen that the proportion of international revenue to total revenue has continued to decrease since 1976. Figure 5 displays the current situations of the industry's overseas construction in recent years. The graph in Figure 5 compares changes in the proportion of international contract amount to the total of international and domestic contract amounts among Korean builders, top 400 global contractors, and top 225 international contractors. As the graph shows, overseas construction by the top 225 international contractors account for over 30% of their revenue totals. When it broadens into the top 400 global contractors, the percentage of overseas construction revenues to the totals is higher than that of Korean contractors. Since 2002, in particular, there has been a big gap in the percentage of overseas revenues between the Korean Construction Industry and the top 400 global contractors, and it explicitly signals that the industry's

competitiveness in overseas markets has been weakening recently.

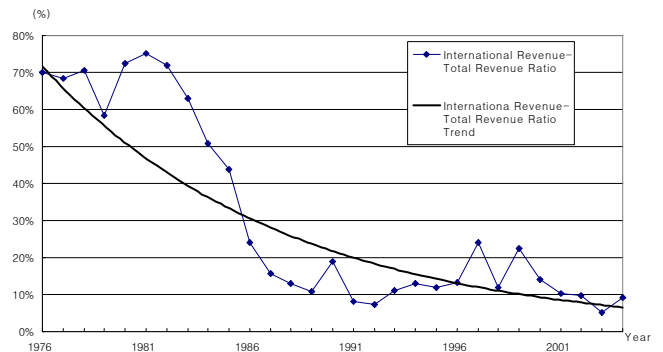


Figure 4. International Contract Amount-Total Contract Amount Ratio of Korean Construction Industry

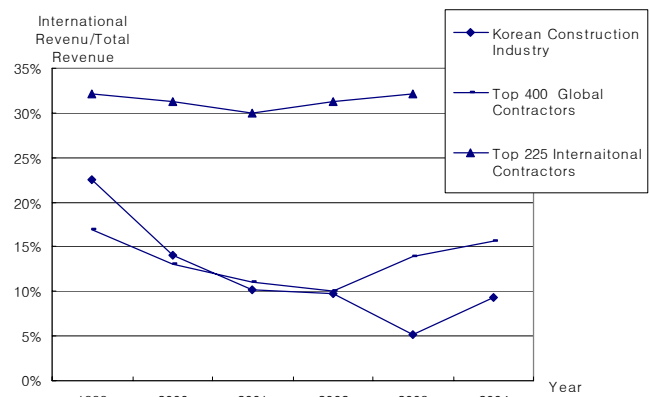


Figure 5. International Revenue-Total Revenue Ratio of Korean Construction Industry, International Contractors, and Global Contractors

#### 3.2 Causes for Lost Marketing Competitiveness

##### (1) Domestic Systems and Policies which do not meet Global Standards

Korea's construction-related systems and policies do not meet the level of global standards, and this is hampering its construction industry's competitiveness and marketing efforts abroad. For instance, the domestic delivery systems are inadequate for competition with global firms, there are restrictions on business fields to operate and bidding systems are based on various protection policies.

##### (2) Failure to foster Management Abilities

There is one big difference between construction practices in the Middle East in the 70s and 80s and overseas construction these days. In the Middle East the construction was performed by direct operations with workforce brought from Korea to local sites, but now it is management-oriented construction which controls local workers or subcontractors who supply workforce from 3<sup>rd</sup> countries. However, Korean contractors in overseas markets failed in switching from direct operating paradigm in the Middle East to Management Construction in Southeast Asia. It eventually resulted in a big drop in their contract amounts. What is more, there were many bad contracts with mistakes in contracting and

quotation caused by failure of risk management, and there were deficit projects due to clumsy process control. For these reasons, many Korean contractors removed their operations from overseas and even large companies are skeptical about performing overseas projects.

### **(3) Disappearing Entrepreneurship**

The pioneering and growing periods of the industry's overseas construction were characterized as the symbol of entrepreneurship. Charismatic owner-entrepreneurs like the late Jung Joo-young, former CEO of the Hyundai Group and Kim Woo-joong, ex-CEO of the Daewoo Group indomitably challenged themselves to open up overseas markets starting from scratch. However, this owner-entrepreneur era ended, and professional managers these days are not willing to enter overseas markets and are being complacent with their performance in the domestic market. They call out their slogan "Let's win projects with high profitability and low risk", but the problem is that nobody is willing to award that kind of project so easily in this fiercely competitive market environment. They, therefore, do not want to get involved in risk-accompanying overseas projects because they are suffering from deficit projects and deteriorating profit situations caused by their weakened competitiveness. Also, since they can get enough projects within the nation, thanks to various protection policies and coordinated market share manipulation among them as the market grows, they are unwilling to go the extra mile to find markets outside Korea. It is quite opposite to US situations where the top 400 contractors have 7.7% profitability in overseas construction while their profitability is 3.2% in America.

## **4. MEASURES TO IMPROVE MARKETING COMPETITIVENESS OVERSEAS**

### **4.1 Changing Competition Paradigm**

The first thing to be undertaken for Korean builders to gain competitiveness is to change their paradigm of viewing competition in overseas markets. They should recognize that competition in overseas markets is different from that of the Korean market and come up with strategies that fit overseas markets.

Here are eight factors that affect competition structure in overseas markets. ① Design-build Turn-key delivery is increasing rather than partial contracts such as design or construction. ② Private investment methods are being widely applied. For example, there are financing-by-contractor delivery methods where contractors provide owners with financial sources for their projects, and private investment methods where owners provide land only and developers build structures (B.O.T, B.T.O). ③ Process management (Construction management) rather than production technologies such as design or construction technologies are becoming more crucial. ④ Political and diplomatic influence in overseas markets is now imposed by government, beyond private sector's efforts. ⑤ In order to enhance competitiveness in diverse aspects, the domestic market should be robust. ⑥ Building up cultural, linguistic and human networks is the critical element for the success of

overseas business. ⑦ It is necessary to arrange portfolios of proper competition products in consideration of markets by products and regions and to make a strategic move based on them. ⑧ Financial support by the government for entering overseas markets is very important, and therefore, it is very crucial to prepare and execute government-level marketing strategies.

With these key elements kept in mind, if Korean competitors benchmark advanced countries and firms in overseas construction, they can come up with strategies that will bring them competitive advantage.

### **4.2 Measures to Improve Competitiveness Overseas**

#### **(1) Improving Design, Engineering and CM/PM Abilities**

In today's overseas markets, Construction Management is emerging as a core ability and accordingly CM/PM abilities are required along with design, engineering and construction strengths. There will be two ways to foster these abilities. The first strategy is to step up Korean technicians' abilities from a long term point of view. In order to do that, basic education in college should be carried out substantially along with professional training programs. The second one is, from a short-term point of view, to utilize foreign technicians by inviting them or making an M&A deal with foreign firms in order to develop Korean builders' organizational-level abilities. By doing so, it is also possible to strengthen competence of Korean technicians. In order to bring the maximum effect though, both of the strategies, which are interdependent on each other, should be carried out and applied simultaneously.

#### **(2) Advancement Strategies by Areas and their Execution**

In advancing into foreign markets, strategies for civil, architectural and industrial construction areas are different from each other. With regards to Civil and Architectural, local firms or Chinese firms dominate the markets for the simple construction of buildings, roads, water supply and drainage systems and bridges. Therefore, Korean contractors should avoid these low-price areas and instead focus their abilities on high-rises, high-tech production plants and international level projects which require advanced technology. Also, they should actively push ahead with their efforts to enter design, engineering and CM/PM markets.

In case of the industrial construction area, Korean builders should undertake intensified specialization strategies on the areas such as distillation facilities that they have competitive advantage over others, and need to come up with ways to obtain competitiveness for their weak areas such as the process-based industrial plants. Besides, the development area can become an alternative area. In order to nurture it strategically, it is necessary to enhance construction management abilities based on risk management and project financing capabilities as well.

#### **(3) Nurturing Professionals and Enhancing Specialized Skills**

In order to train technical experts who can adapt themselves internationally, it is required to systematically intensify theoretical and hands-on education in areas such

as procurement, development, contracting, financing and construction management. In addition, construction-related college education should be globalized in order to improve basic capabilities needed in international markets, and efforts should be immediately made for early establishment of engineering education certification and globalization of P.E. certification.

#### **(4) Improving Financial Mobilization Capacity**

Financing-by-contractor delivery method and investment-development projects tend to increase, and private investment in infrastructure is greatly demanded. In order to profit from this trend, private funds should be raised for expanding financial support. Along with it, the Korean government needs to increase spending of its Economic Development Cooperation Fund (EDCF) on construction considerably to assist in improving financial mobilization capacity. Then, it will eventually become a measure to adjust to the changing trends in international markets whose focus is shifting from technology to international financing and creation of new projects.

#### **(5) Improving Technology through Strategic Partnership and M&A**

Global organizations are using M&A very actively as a way to supplement their weakness and improve their competitiveness in international markets. Likewise, Korean builders need to take advantage of strategic partnering and M&A in order to progress rapidly in overseas markets and can simultaneously pursue globalization.

#### **(6) Correcting Domestic Delivery Systems that do not fit International Competition Structure.**

Unlike before, the Turn-key delivery method is on the rise, and it clearly indicates that it is inevitable for businesses to have to compete with integrated capabilities throughout engineering, procurement and construction encompassing design and engineering abilities. Therefore, efforts should be made to improve domestic delivery systems and, eventually, to lay a foundation for solidifying Korean firms' international competitiveness so that they can prepare themselves for the changing overseas market trend. That is, by easing division of permitted operating areas, the government has to foster organizations fitted with competitiveness throughout all Engineering, Procurement and Construction areas and introduce various delivery systems to enable them to experience competition structures for the systems.

#### **(7) Opening up New Markets and Market Diversification through Localization**

The Korean construction industry is heavily dependent on Southeast Asia and the Middle East and, in order to expand its international markets throughout the globe, it should form a human network and raise global knowledge on language and culture. In addition to this effort, Korean government agencies and trading companies overseas should be a window through which marketing information can be collected. Also, the industry needs to set up proper project portfolio strategies by regions and products so that countermeasures can be taken not at the individual company level but at the industry level. At the same time, localization strategies tailored to various international markets should be

implemented aggressively to minimize highly-paid Korean workforce.

#### **(8) Government-level Support and Construction Diplomacy**

In most cases, winning large-scale overseas projects needs not only businesses' efforts but also full-scale government-level support. It is because the construction project is not just a project itself. It can greatly increase mutual interests and improvement of relationships between countries involved. This, in particular, is more evident in developing countries or underdeveloped countries, and with a thorough understanding of this, the government should prepare measures to back up its construction industry. Especially, as a way of getting full support from the government, overseas construction can be added to the nation's current six major export industries (electronics, automobiles, shipbuilding, steel, petrochemistry, general machinery) for its strategic management. In 2003, for instance, the total export of its steel industry marked US\$ 9.3 billion while its revenue in the overseas construction in 2004 stood at US\$ 7.5 billion. It means that overseas construction is entitled to become one of the nation's major strategic export areas considering its revenue volume. It is also necessary to recreate an industrial atmosphere to go global by supplementing governmental assistance measures and incentive systems such as tax benefits, marketing benefits for domestic projects and financial support.

### **5. CONCLUSION**

Korea's construction industry spared the nation from the two 'Oil Shocks' and played as a driving force for the country's industrialization through its business abroad. However, its importance and influence have waned greatly.

In this paper, I reviewed Korea's overseas construction history briefly by major phases and observed characteristics of each phase. Then, I examined the industry's weakening marketing competitiveness abroad and analyzed its causes and presented solutions to them.

Although the significance of overseas construction to the nation's construction industry has diminished, it is a very essential part which we should not surrender. It boosts the Korean construction industry and strengthens the country's competitiveness and globalization. Therefore, the construction industry has to find new overseas markets with fresh strategies. In order to do that, we need to benchmark how other leading industries like electronics and automobiles set up globalization strategies and accomplished their success in world markets. From which we can come up with timely strategies and open up new overseas markets. At the same time, we have to review and analyze every detail of international leaders' strategies upon which we can create and execute strategies to develop the Korean construction industry. Furthermore, in order to better the industry's competitiveness in overseas markets through these strategies, efforts by both the industry with entrepreneurship and by the government with support measures are needed. Finally, the construction industry will witness the Renaissance of its overseas construction when the strategies are executed based on new perspectives.

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