

# THE SUCCESS FACTORS OF PARTNERING IN THE SOUTH KOREA PM&CM MARKET

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**ABSTRACT:** Since the designation of the South Korean Construction industry as an open market industry by the World Trade Organization (WTO) in 1994, South Korea's construction firms were exposed to competition from firms of other advanced countries. Increased competition in the industry raised quality of production and lowered the cost of construction projects. Therefore, many big construction projects were planned and constructed with foreign construction partners during the last decade. Also, from those projects the South Korea Construction industry accumulated experience in and knowledge of both project management and construction management perspectives. However, in the process of conducting those big projects, many problems - specifically responsibility and the limit of competence - occurred between foreign construction partners. Hence, this study attempts to improve its role model that is for local and foreign companies to enter into Joint Ventures in the South Korea construction industry.

*Key words: PM&CM Market, Joint Venture, Partner, Project Success*

## 1. INTRODUCTION

The South Korean construction industry has contributed to economic development in South Korea by constructing national fundamental facilities such as seaports, airports, housings, and surface transportation facilities. The importance of the construction industry in the national economy has conspicuously increased since the 1960s due to Korea's industrialization and urbanization. In the 1990s, its importance has continued to grow due to an increase in construction projects. The South Korean industry contributed to 20% of South Korea's GDP in 1996. Although there have been a decline after facing the Asian Economic crisis in late 1997, South Korea's construction industry will continue to contribute significantly to South Korea's GDP.

In 1994, the World Trade Organization (WTO) designated the South Korean Construction industry as an open market industry. Therefore, South Korea's construction firms were exposed to competition from other advanced countries. Increased competition in the industry raised quality of production and lowered the cost of construction projects. Because regulations on safety have increased, the construction firms of South Korea are having difficulties in adapting to the changes.

To improve their competitive advantage, many big construction projects were planned and constructed with foreign construction partners during the last decade. From those projects the South Korea Construction industry accumulated experience in and knowledge of both project management and construction management perspectives. However, in the process of conducting those mega projects,

many problems - specifically responsibility and the limit of competence - occurred between foreign construction partners.

## 2. OBJECTIVE

This study is designed to accomplish five major objectives. The first is to understand the South Korean Construction Industry joint venture system and analyze foreign contractors<sup>1)</sup> who are working in the industry. The second is to understand the relationships among project organization and the interactions among collaborating parties. The third objective is to assess the results of technology transfer in terms of effectiveness among the different types of collaboration. The fourth objective is to focus on the strategies used in operations and human resource management during the business life of a Joint Venture. Finally, this study suggests a partnering organization model and strategies for Joint Ventures for the construction industry in South Korea.

## 3. WHAT IS A JOINT VENTURE?

To work with foreign construction partners, construction firms should have an agreement for temporary collaboration of the parties. However, these form used occasionally as a Joint Venture or Consortium agreement. It is needed to ensure the definition of Joint Venture and Consortium. The

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1) For the purpose of this paper, the term "foreign partner" or "foreigners" refers to the companies based in the Western Hemisphere.

definition of a Joint Venture is taken from Section 3055 of the Canadian Institute of Chartered Accountants ("CICA") Handbook:

A Joint Venture is an arrangement whereby two or more parties (the ventures) jointly control a specific business undertaking and contribute resources towards its accomplishment. The life of the Joint Venture is limited to that of the undertaking, which may be of short or long-term duration depending on the circumstances. A distinctive feature of a Joint Venture is that the relationship between the ventures is governed by an agreement (usually in writing) which establishes joint control. Decisions in all areas essential to the accomplishment of a Joint Venture require the consent of the ventures, as provided by the agreement; none of the individual ventures is in a position to unilaterally control the venture. This feature of joint control distinguishes investments in Joint Ventures from investments in other enterprises where control of decisions is related to the proportion of voting interest held.

When a firm forms a Joint Venture relationship with another entity, each party must carefully identify and evaluate the potential rewards and risks associated with the business opportunity. There should be a thorough and careful assessment of each company's expertise, skills, financial capability, and other business resources. The companies must also completely assess each other's weaknesses in order to determine whether the Joint Venture is the most appropriate tactic for all involved. While many countries are trying to obtain advanced technology and anticipate the development of their own industries through technology transfer, some are successful and some do not achieve success because of poor management decisions. There are underlying reasons for the success or failure of technology transfer to different countries, industries, and firms; each individual firm has its own corporate culture; and each industry has its own characteristics. These different environments can affect the results of the technology transfer.

In general, the international involvement includes the requirement of a Joint Venture with local firms and the subcontracting of certain works to nominated local contractors, while the local involvement offers certain marginal preferences to those Joint Venture bidders whose local shares reach a certain percentage. The mandatory requirement of a Joint Venture between local and international contractors is most commonly used.

### 3.1 Types of Joint Venture

In addition to the equity Joint Venture, which involves foreign investment, and the contractual Joint Venture, which involves know-how arrangements, collaborations between South Korean and international contractors include a consortium type of Joint Venture. An Equity Joint Venture and a Consortium Joint Venture both involve actual capital investment from international contractors.

#### Consortium Joint Venture

Under this type of collaboration, each member generally bears the responsibility of executing the works that are clearly divided and stipulated in the Joint Venture agreement. During the pretender stage, each party is responsible for

preparing various bidding documents, such as qualification documents (including working records, registration certificate, balance sheets, and other necessary legal paperwork), the technical proposal, the bill of quantities, bond, and related costs. These related costs are defined as:

- (a) The procurement of the tender documents
- (b) Travel expenses and accommodations for the estimating crews
- (c) The procurement of the tender bond according to its share of the entire project

This is calculated on the basis of work items divided and agreed to among the Joint Venture partners.

#### Equity Joint Venture

This type of Joint Venture may be defined as new investment involving shared ownership between local and foreign partners and the agreement may be bipartite or multipartite. As with most other industries, this type of Joint Venture is widely used in general construction projects. Due to the need for foreign contractors to satisfy the prequalification requirements during the tender and the need for technical support in the subsequent execution of the work, foreign contractors tend to enjoy a better negotiation position and to own a bigger share of the work than do local contractors. This type of Joint Venture was most favored by foreign contractors that were seriously interested in becoming involved in the local market with a long-term perspective; however, it was not preferred by local contractors because of the lack of control over the Joint Venture entity.

### 3.2 Advantages and Disadvantages of Joint Venture

The concept of Joint Ventures is a positive one, in the sense that it combines the factors of production from more than one country and helps to optimize the performance of those factors. This means that both the feasibility and durability of any Joint Venture depends on the equitable distribution of benefits among all participants.

Most Joint Ventures are established for one or more of the following reasons:

1. The need to pool and utilize the expertise, skills, and other business resources of more than one entity
2. The requirement of greater capital investments and other forms of financial support because a single entity is unwilling or unable to provide the resources
3. The spreading of business risks among more than one entity in order to lower the risk to each entity
4. The utilization of Joint Ventures as an "off balance sheet financing" technique
5. Market entry

Taking a foreign partner may be a good method for international market expansion. Many companies use Joint Ventures to enter foreign markets. Unless participating in a Joint Venture, these companies often could not compete because they lack capital, technology, and personnel. The legal requirements and the location of economic sectors may limit the entry into majority-owned foreign ventures.

However, the Joint Ventures overcome these concerns thus allowing the South Korean construction firms to enter the international market.

A disadvantage of the Joint Ventures includes high risks due to cultural differences, inability to enforce international contract law and exposure to outside forces (e.g., volatile currency markets, political whims, and difficulties in the enforcement of international property rights). Difference in opinions regarding profit sharing can create disruption and legal concerns.

### 3.3 General Perception of Joint Ventures

South Korean firms generally understand Joint Venture as Consortium Joint Venture (referred to as Consortium) rather than as Equity Joint Venture. South Korean firms recognize the formation of a consortium with a foreign firm not in the unit of projects, but rather in the unit of entire corporation level cooperation. This is different from the view of foreign firms which recognize consortiums as project center, or separate units of projects. Also, while foreign firms view the role of leading firm in a consortium as the relationship of main and sub-contracting, South Korean firms recognize the relationship as horizontal cooperation. A notable distinction is that Korean firms recognize the role of the leading firm as a channel of contracting and administration with the owner. In contracts related to production of deliverables such as design and construction, South Korean firms prefer responsibility sharing methods. On the other hand, in the area of process management such as supervision and project management, they prefer joint execution method for contract format, yet prefer execution of task by the division of leading role of specific tasks with respect to competitive advantages within the consortium.

## 4. CASE STUDY

Last decade, the Korean Construction Industry has completed many Joint Venture projects based on Construction Management delivery system. Table 1 shows the cases that completed by either consortium or equity Joint Venture.

**Table 1.** Joint Venture Projects

Projects	Types of Joint Venture
Incheon International Airport	Consortium Joint Venture
Passenger's Terminal	Equity Joint Venture
High Speed Railroad(KTX)	Consortium Joint Venture

### Incheon International Airport

The project management service unit consists of one domestic firm and three foreign firms. These firms are Korea Power Engineering Company, Inc. (KOPEC), Parsons, Tuner, International Computer and Telecommunications, Inc. (ICT). All are engaged in the field of project management.

### Passenger's Terminal

The joint venture consisting of three domestic firms (Hanjin, Samsung, Daewoo) and one foreign firm (Flour Daniel) provided the construction, and the foreign firm also

provided a fast track technology. In the organization, the integrated CM team was organized to perform the construction with the practical responsibility and authority of quality management and process management. The managers of foreign firms were nominated as the team leaders in each field to encourage the sense of responsibility and to promote technology transfer.

### High Speed Railroad Phase I(KTX)

The High Speed Railroad Phase I Project has been completed by Korea Railroad Corporation. As a technical inquiry with a joint venture of a matter, "Program Management Advisory Service Agreement" has been formed to Consortium Joint Venture with foreign firm (Bechtel) and Korea Power Engineering Company, Inc. (KOPEC) in Phase I contract.

### 4.1 Success or Failure

South Korean nuclear power plant construction technology has been acknowledged both domestically and internationally. The time period from 1970's to 1995 when the nuclear power plant construction technology has reached a level of complete self-sufficiency, is recognized as one of the most successful case of cooperation between foreign and South Korean firms. In the case of nuclear power plants, there were no domestic law, regulation code and standards until the early 1980's, so foreign law and regulations had to be applied. Official language on all documents was English and English standard units(foot-pound) were used for engineering calculations. As a result, there were no problems for foreign firms to lead the task of project management and engineering performance in South Korea. However, as domestic laws and regulations were instituted in the late 1980's, the project was able to be successful by going through a transition in which the role of foreign experts changed from leading to either support or advisory function. In contrast, during the KTX project foreign firm was given the leading role in project management advisory function, neglecting domestic laws and regulation as well as the environment which used Hangul as the primary language. This led to dissatisfaction of the owner, produced much friction within the consortium, and ultimately resulted in questioning the competence of one of the top firms in the world. The problem between foreign and domestic firms in KTX project was not a matter of competence, but rather the difficulty in accommodating Korean culture and laws. The suggestive notions developed out of the conflicts between international firms in KTX were referenced in the first stage construction project of the Incheon International Airport. It can be interpreted that while the consortium in charge of project management was composed of three foreign and one South Korean firms, the task was accomplished successful because they divided their roles accordingly.

### 4.2 Identified Problems

In South Korean market, both domestic firms and owners prefer a method in which the foreign firm bears the responsibility of the production deliverables in production

areas such as design and construction. In other words, in design engineering service such as concept design or detailed design, the foreign firms must have independent responsibility for specific calculations in their deliverables. This is due to the fact that deliverable production technology (design or construction technology) has the characteristic of being able to migrate from one country to another. On the other hand, it is difficult to specify responsibility for service activities such as project management or supervision. Thus, it is essential for respective members of a consortium to cooperate. Project management, which falls under process, is ultimately influenced by custom and culture as well as the respective nation's law, institution and language. Hence, in projects executed in South Korea with South Korean laws, Hangul and construction project led by domestic firms in design and construction, South Korean firms should have leading role in project management for the success of the consortium as well as the concerned projects.

A review of the literature indicates that common problems of partnering can be defined under nine major headings (Table 2).

**Table 2.** Common Problem of Partnering

1. Misunderstanding Partnering Concept	<ul style="list-style-type: none"> <li>Limited experience in the partnering approach affected the understanding and knowledge of project participants (Larson and Drexler, 1997)</li> <li>Unfamiliarity or misunderstanding of the partnering concept by the project participants could cause a failure in partnering (Sanders and Moore 1992; Harback et al. 1994)</li> </ul>
2. Relationship Problems	<ul style="list-style-type: none"> <li>The objective of partnering encourages project participants to change from their traditional adversarial attitude to a more cooperative, team-based approach to preventing disputes (Moore et al. 1992; Loraine 1994)</li> <li>Win-win thinking is an essential element for partnering success (Hellard 1996; Ruff et al. 1996)</li> <li>Partnering does not always work without risk; to develop trust for each other might be a risk in itself, although it is the key element of successful partnering (Cowan et al. 1992)</li> </ul>
3. Cultural Barriers	<ul style="list-style-type: none"> <li>Partnering is culturally opposed to the traditional implementation of construction projects. Established culture is hard to change (Hellard 1996; Lazar 1997)</li> </ul>
4. Uneven Commitment	<ul style="list-style-type: none"> <li>Partnering requires the commitment of all project participants; it means overcoming the perceived risk of trust and requires actual commitment rather than lip service. Project participants must have total commitment to the partnering process, but an uneven level of commitment is common in practice because of differing goals among parties (Moore et al. 1992)</li> </ul>
5. Communication Problems	<ul style="list-style-type: none"> <li>Various partners do not trust each other completely and are not willing to communicate and exchange information freely (Larson and Drexler 1997)</li> <li>Sometimes communication fails and results in less collaboration and unreasonable demands due to the ignorance of other parties (Harback et al. 1994; CII 1996; Gardiner and Simmons 1998)</li> </ul>

6. Lack of Continuous Improvement	<ul style="list-style-type: none"> <li>Traditional responsibility for continuous improvement normally rests with contractors but is a joint effort to eliminate waste and barriers (Moore et al. 1992; Brown 1994) that is difficult to maintain</li> <li>Frequent barriers encountered in improvement efforts are approval time and development costs. Joint work on improvement schemes yields a good recognition of the inherent risks of alternative schemes (Cowan et al. 1992)</li> </ul>
7. Discreditable Relationship	<ul style="list-style-type: none"> <li>Partnering produces many benefits to the construction industry, such as a better relationship, open communication, trust, better project performance, innovation, and reduced information flows. However, some practitioners raised the concern that this improved relationship could be abused by some contracting parties and lead to allegations of corruption (Newman 2000)</li> </ul>
8. Inefficient Problem Solving	<ul style="list-style-type: none"> <li>Very often issues and problems are allowed to slide and escalate in the partnering process. Problems do not disappear automatically with the signing of the partnering charter (Sanders and Moore 1992; Brown 1994)</li> </ul>
9. Insufficient Efforts to Keep Partnering Going	<ul style="list-style-type: none"> <li>The formation of a partnering arrangement requires extra staff, time, and resources. It may initially be costly to align all organizations with every partnering undertaking (Larson and Drexler 1997)</li> <li>Partnering also needs nourishment throughout the life of a project. After the initial workshop, it is easy to get back to daily activities and ignore the partnering concept (Moore et al. 1992)</li> </ul>

## 5. SUGGESTIONS (MODEL)

The local contractors predict as many potential problems as possible including the shortage of technology before the execution of the project through feasibility studies and perfect preparation at the initial step of the project and to plan the proper size of the import of foreign expert manpower and appropriate organization with the local manpower. It is desirable to consider the organization with the strategy of technology transfer and organize it so that the local contractors can share the technology with the foreign experts. Further, the local manpower should manage the foreign manpower, or at least, the job should be performed together. As separated into three stages, the model provides for improvement through each stage.

### Introduction Stage

In the introduction stage, the local contractor should make the organization fit efficient project performance and technology transfer. Since the active will of the owner is most important in the initial stage, it is important to prepare a PM/CM core team within the organization and have the team administer the foreign experts. In this organization, local contractors:

- (1) Provide the limits of responsibility and scope of the job
- (2) Evaluate the foreign expert manpower
- (3) Continue to store the data

It is important to make the overall purpose, orientation, and plan after figuring out the prequalification (See Figure 1).

- ① In the integrated PM/CM unit consisting mainly of foreign manpower, which has a few high-ranking managers of the domestic customer and proceeds the various projects.
- ② After selecting the personnel from the integrated PM/CM unit and discussing it with the core team, the technology support division is posted in the domestically weak fields. The supporting division is mixed with local and foreign manpower at a similar level. The integrated PM/CM unit and the technology support division take charge of management technology, and the software. The job of core team is to select and manage proper foreign manpower and post them in the project organization with the cooperation of the integrated PM/CM unit.
- ③ For the quality safety team to do the job of quality management with the cooperation of the project managers and managers of the support divisions, a systemized process is necessary. The systemization of the design process and document management should include review of design maps, research on estimation, research on construction, quality management, and preparation and maintenance of specifications.
- ④ The comprehensive information management office collects and keeps all the data on similar existing projects and current project from the initial stage. The information is to be shared through computerized connections to the overall project, the divisions, and the office coordinates the system for decision making.

**Development Stage**

In this stage, the organization is made for the efficient project performance and corresponding job share. In the equal position, the local and foreign experts are mixed and the atmosphere for the positive achievement of the goal in mutual understanding and trust. Through perfect records and continuous accumulation of the data, the knowledge is enhanced. The various progress reports are prepared in the foreign partner’s language and when they participate, it is efficient to conduct the meetings in the foreign partner’s language. After some period of time, local contractors allow some discretion of the job to the foreign partner. Persuade, adjust some impractical part so that the foreigners and local contractors are accustomed to the same method of job performance. In this stage, it is also desirable to provide responsibility and authority to the foreign expert manpower.

**Implementation Stage**

In implementation stage, local contractors organize for utilizing the foreign experts in special fields. To compensate for lacking technology, local contractors actively utilize the foreign expert manpower. Local contractors use the job performance with the foreign experts as the window to share the new techniques and new data of the developed countries. To acquire missing technological advances, the selective utilization is desirable. It is better to accept selectively after identifying the technology. The form of the organization should be different according to the specialization of the expert manpower.

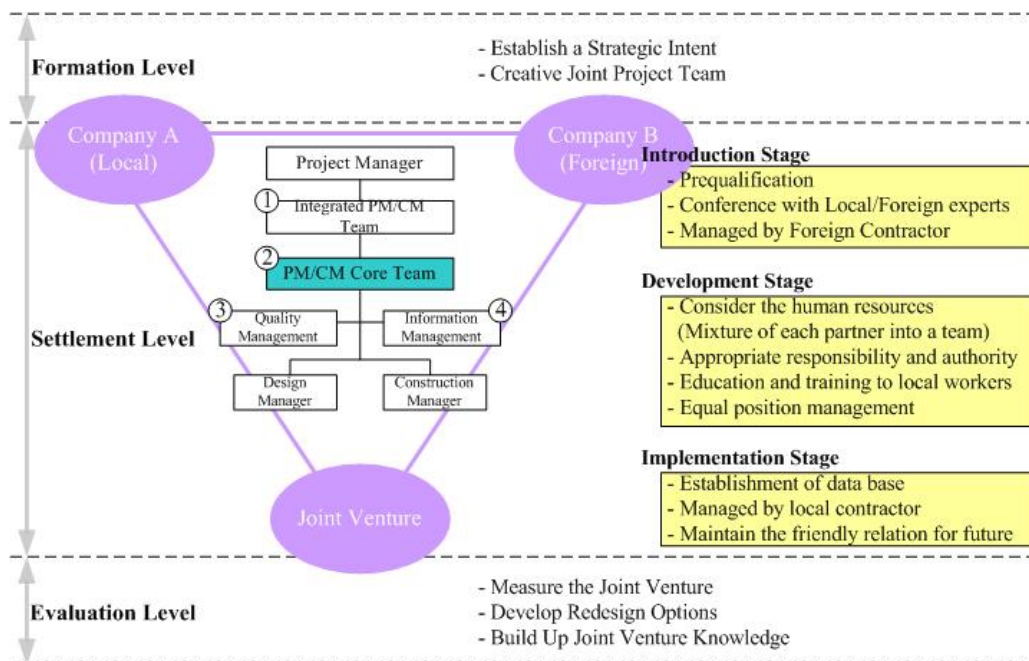


Figure 1. Suggestion Model on Joint Venture

Because the divisions are led by local manpower other than the special fields where the foreign experts join, the organization for prompt delivery of the leader's command and for strengthened teamwork is desirable. Hence, in this organization, the quality of the project managers is important and the horizontal association of lower level personnel in charge is required.

## 6. CONCLUSION

Since 1997, the South Korean construction market has become completely open. The foreign expert manpower has advanced to the fields of management technology and after advice on unique technology or auditing most of the foreign firms use Joint Ventures or branches. Many parts of the projects using foreign manpower experience problems in that their potential cannot be fully applied. The specific causes are the unreasonable system because of the underdeveloped local construction background, unclear responsibility and authority due to poor project operation method, the communication problem with foreign manpower, unreasonable personnel assignment, and problems with payment and rewards. Some owners also have problems such as insufficient recognition ability, poor planning, weak leadership, poor adjustment ability, and no application of program or project management.

The framework for international Joint Venture presented here addresses two questions: what management areas can be influenced during the development of Joint Venture? And what can influence these areas? While the first question focuses specifically on the areas of management, the second question addresses the level of management activity. The proposed framework, shown in figure 1 presents three levels of management:

- (a) Formation
- (b) Settlement
- (c) Evaluation

Within settlement levels, three different stages are addressed. The proposed each stage will concentrate on two points:

- (a) the issues for each stage to consider
- (b) action which could be taken to help problems of Joint Venture

In order to manage a Joint Venture successfully, it is necessary to be aware of the level of analysis at which the applied action occurs. Success ultimately requires that the goals of the whole Joint Venture system have been fulfilled.

Technology transfer usually takes a relatively long period of time to achieve favorable results. It is impractical to expect the successful transfer of a given technology during a limited project life when the transfer involves a relatively complex technology. Project-to-project relationships and the transfer of technology from international contractors to local partners produced no benefits for the international contractors in a severe market because the collaborations between local contractors and international contractors tend

to be short-term. International contractors tend to play a passive role in providing technological information to the local contractors and sometimes even conceal critical information. However, in all cases in this study, it was difficult to identify that the suppliers were not willing to teach local contractors. Managerial control over the project is considered to be a "must" for local contractors in order to require that personnel of international contractors take necessary steps to provide adequate technical information and to facilitate the process of technology transfer.

When the job is performed together with the foreign expert manpower, the problem of communication should be solved. The most important thing in communication is the ability of the local personnel to communicate in a foreign language. They must demonstrate a basic understanding of the culture of the other country. Hence, for mutual cooperation and smooth job performance of the local personnel and foreign personnel, it is necessary to prepare and instruct the employee in the foreign language. It is desirable to select local personnel and foreign personnel who are willing to understand the other cultures.

The aim of this paper is to contribute:

- (1) to promote Joint Ventures
- (2) to promote technology transfer
- (3) to reduce the risk of Joint Ventures
- (4) to supply necessary information through detailed investigations of the project sites
- (5) to invest better effort in this important subject.

A better construction environment can be made, through more Joint Ventures, better inter-company communication, proper planning, and significant technology transfer.

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