Country case study: Korea

WHY READ THIS CASE STUDY?

- (A) This fast growing developed country is a very good example for having effective governmental action to promote private capital investment in infrastructure which now includes an extensive network of about 3,100 km of highways.
- (B) It has successfully implemented many PPP projects since the 1990's. Regarding highways, the Korean Government plans to complete 3,300 km of additional highways with an integrated national network by 2020 as well as 907 km linked to the trans-Asian road network between Japan and China.
- (C) In the late 1990's, Korea learnt lessons from the Asian financial crisis to adapt its policy to develop a more efficient PPP program.
- (D) A main lesson from this country is that in order to develop PPPs, initial arrangements may well not have been ideal. Therefore, the importance of monitoring PPP programs and having flexibility, to adjust programs is thus important. Korea has made and continues to make substantial adjustments, as well as fine tuning, to its PPP regulations.
- (E) The PPP program also encourages the private sector to use its creativity and innovation capacities through unsolicited projects which are allowed but have been much more restricted under recent PPP laws to better control such types of projects and avoid their negative aspects.

Background

South Korea, officially the Republic of Korea and often referred to as Korea is a presidential republic in East Asia, occupying the southern half of the Korean Peninsula. Also known as the "Land of the Morning Calm", it is neighbored by China to the west, Japan to the east and borders North Korea to the north. South Korea's capital and largest city, Seoul, is a global financial and cultural center and the second largest metropolitan city in the world.

South Korea is a major economic power and one of the wealthiest countries in Asia. It is a developed country with a high standard of living, having a trillion dollar economy that is the third largest in Asia and 13th largest in the world. Forming the G20 industrial nations and the world's top ten exporters, it is an APEC and OECD member, defined as a High Income Nation by the World Bank and an Advanced Economy by the IMF and CIA. A major non-NATO ally, it has the world's sixth largest armed forces and the tenth largest defense budget in the world. The Asian Tiger is leading the Next Eleven nations and is still among the world's fastest growing developed countries. Today, its success story is known as the "Miracle on the Han River", a role model for many developing countries.

South Korea is leading several key industries in the world, particularly in the fields of science and technology. It is a world leader in information technology such as electronics, semiconductors, LCD displays, computers and mobile phones, led by Samsung and LG. Home of the world's third largest steel producer, POSCO, it is the world's largest shipbuilder, the world's fourth largest oil refiner and one of the world's top five automobile producers, headed by Hyundai and Kia.

Investment in Infrastructure

There have been many changes in infrastructure development policies over the past in the Republic of Korea.

In the 1960's, investment in the transport sector was mainly made in railways, and industrial ports were also built to handle imported materials. However, in the late 1960's, the focus of investment in the transport sector began to shift to roads with the massive construction of **expressways**[4].

During the 1970's and 1980's, the Republic of Korea achieved exceptional economic development. The Government long-term development plans focused clearly and exclusively on infrastructure with priority being placed on the construction of facilities to promote industrialization, such as the Seoul-Pusan Expressway.

However, during this period, the Government changed its policies for infrastructure development and began to place great emphasis on regional development. Less allocation of funds for transport infrastructure facilities focused on major congestion problems in the transport system rather than on the necessity to mobilize new resources for capacity expansion.

In fact, efforts to develop private investments in infrastructures began in the early 90's. The introduction of a first program to promote private sector participation in infrastructure development started in 1994. The PPI program aimed at creating infrastructure facilities by the private sector in order to reduce the public budget and to exploit the efficiency of the private sector. It was during this time that the importance of transport systems was recognized.

PPP History

"The Private Capital Inducement Act" of the Republic of Korea was formally launched in 1994. The concept of private participation was not new to Korea. However, this act was the first legal framework which specifically promoted PPI.

The first Act divided PPI projects in two categories: Category I projects dealt with the most strategic infrastructure projects such as roads (and also railways, subways, ports,

4 The two major road construction projects were the Gyeongin Expressway in 1968 and the Gyeongbu Expressway in 1970.

airports, water supply and telecommunications); Category II projects involved other infrastructure projects (like gas supply, bus terminals, power generation plants, tourism promotion area, sport complexes and other more commercial fields).

It meant that private sector could only obtain ownership in category II projects. As a result, category I PPI projects (especially for roads) could be carried out only through BTO (Build Transfer Operate) scheme, whereas the other PPI projects (in category II) were eligible for other options like BOT (Build Operate and Transfer) or BOO (Build Own Operate) schemes as well as the public-private joint venture company scheme (in which less than 50% of the capital participation was by state or local government).

But this first PPI policy was not really a success because the risks were not always well evaluated. Projects were promoted under the laws governing each sector such as the Road Act. These investments were of limited budget, and operation and maintenance of these facilities by the private party was not allowed; as a result, the Government which targeted 40 infrastructure facilities was only able to develop five of them.

Subsequently, the Asian financial crisis of 1997 damaged the whole Korean economy. This particular context led the Government to take new initiatives to promote private sector participation in infrastructure development. A new PPI law was adopted in December 1998, "The Act on Private Participation in Infrastructure", in order to remove the main constraints to private investment in infrastructure.

In view of reducing barriers to private sector participation, this new Act abolished the former categorization of infrastructure projects. It also improved the procurement process for both solicited and unsolicited **projects**[5] and provided new incentives to private investors.

In addition, it created a special unit, the Private Infrastructure Investment Centre of Korea (PICKO). This Centre acts to provide technical assistance to the Government and local competent authorities to promote private sector participation in infrastructure sectors. Its tasks are preparation of feasibilities studies and PPI tenders, review of studies and evaluation of bids, negotiations and concession agreement conclusion.

Finally the Korean Government prepared a ten-year plan which identified desirable PPI projects. It defined their investment terms and conditions, operation and maintenance facilities as well as government support measures. These projects involved major road infrastructure, the development of which central and local governments had been involved previously.

The enactment of the new Act of 1998 changed the investment climate for Korean PPI. The previous projects under the former act were reviewed. Concessionaires designated

5 The old PPI law had provision for unsolicited projects. A special procedure was defined for them in order to lead the private sector to develop new ideas (different from those included in the PPI projects list of the annual plan). Initially they also benefited from the same advantages as for solicited projects. The new law reduces the advantages for unsolicited projects in order to avoid opportunistic behavior.

under the first PPI law were given a chance to renegotiate their concession agreements in order to take advantage of more favorable conditions.

As a result, by June 2002, ten road projects were in operation like, for example, the **Chonan-Nonsan Highway**[6].

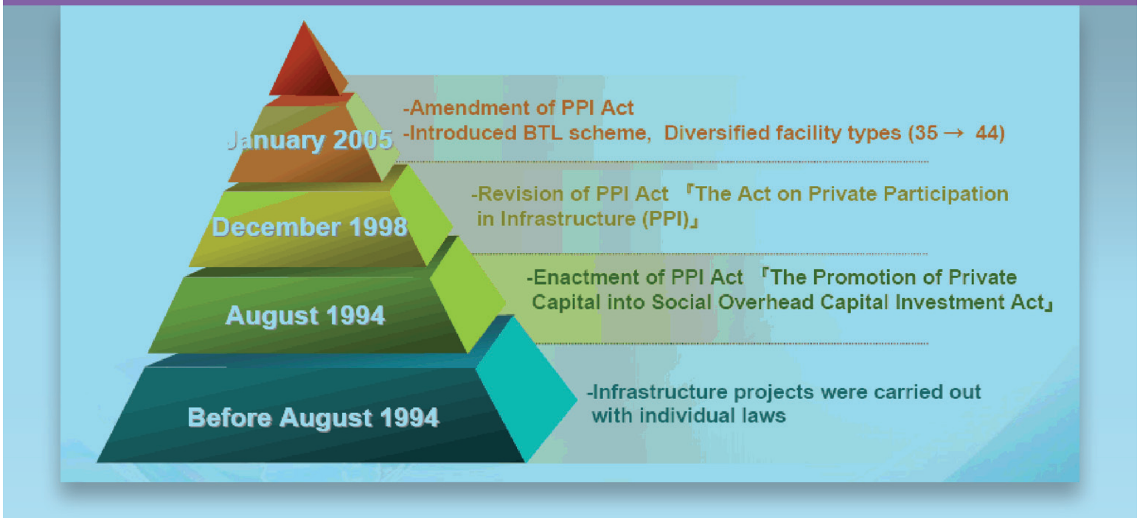
The Act was amended again in 2005. This revision not only introduced Build-Transfer-Lease (BTL) scheme but also expanded eligible facilities to social infrastructure such as education, defence, culture, and welfare facilities. In addition, the revised Act established a specialized agency ("Public-Private Infrastructure Investment Management Center") to provide technical assistance to the Ministry of Strategy and Finance and procuring authorities.

The following changes were introduced:

- The expansion to more diversified infrastructure facilities (44 types instead of 35 before; they include now for example social infrastructure as an eligible sector for PPI)
- The BTL (Build Transfer and Lease) scheme was introduced. The available project types of private participation are now more diversified: BTO (especially in the road sector considered as a key field of infrastructure), BOT, BOO, BTL (this last one being the most popular type now) and ROT (Rehabilitate Operate Transfer)
- The MRG was amended due to excessive demand. It was also abolished for unsolicited projects. For solicited projects, the guarantee period was reduced from 15 to 10 years and the maximum guarantee limit had also been reduced from 90% to 75% (and then to 65%). There was also a new condition: the MRG is not provided for projects which earn less than 50% of forecast revenue.
- The creation of an infrastructure fund;
- The requirement to assess the value for money for all PPI projects;
- The compulsory documents for proposals have been simplified;
- A new PPI unit has also been established (PIMAC) which is hosted within the Korea Development Institute (KDI), a prestigious government research institute which plays a key role in national and regional planning;
- Since 2007, compensation is mandatory for project preparation cost in order to introduce more competition.

6 This highway (80 km/ four lanes) was realized and funded jointly by the Highway Corporation and a Daewoo led private consortium under a BTO scheme, in 1997 in order to improve access to the existing Honam expressway (110 km); it had a five-year construction period until 2002 and it has a 30 years operation period until 2031; it cost KRW 1.7 trillion (equivalent to about 1.5 billion USD).

FIGURE 1. EVOLUTION OF THE PPI ACT



PPP Framework

Financial Modalities and Risks

As mentioned previously, the PPI Act in 1998 and its amendment in 2005 provided new incentives to private investors and notably for foreign investors, including special administrative and budgetary measures provided by the government to assist investors and to mitigate commercial and other risks. These measures refer to a package of financial support facilities and include:

- The application of 0% Value-Added Tax (corresponding to a 10% VAT exemption) for BTO (Build-Operate-Transfer), BOT (Build-Transfer-Operate) and BTL (Build-Transfer-Lease) projects;
- The creation of a Minimum Revenue Guarantee (MRG): the Government guaranteed up to 90% of operating revenues (these conditions were changed when the act was amended in 2005, see above);
- Foreign exchange risk guarantees were adopted to compensate losses due to exchange rate fluctuations; Since the Asian economic crisis of late 90’s, one of the serious concerns for foreign investors was related to foreign exchange fluctuations. This main investor’s risk has been positively limited by the Government: when they exceed 20% of losses, the concessionaire may benefit from adapted provisions (like modifications of tariff rates, government subsidies or adjustment of the concession period).
- The exemption of acquisition and registration tax for land acquisition on BTO projects;
- A bonus is given for early completion of construction or for lower construction costs;

- A buy-out option is allowed in a "force majeure" **case**[7].
- Public loans and loan guarantees may be provided to the concessionaire by the state or local government; an infrastructure credit guarantee fund can be created. A concessionaire or a financial institution may issue bonds in order to procure funds necessary for private investment.
- Subsidies or long-term loan may be granted to the concessionaire by the central or local government; Public sector dividends may be provided to the shareholders in the private sector;
- Sovereign guarantees exist with a maximum limit on operation revenue for solicited and unsolicited projects and a project can be purchased by the State or local government if requested in certain circumstances;
- Other revenue sources are possible when supplementary projects could be implemented jointly with the private investment project;

There are also non-financial supporting measures usually included in the projects agreements which can be considered as other governmental facilities to promote PPP. Korea, for example, adopted a comprehensive law about deregulation of restrictions on property rights with respect to PPI projects.

The acquisition of land could be considered as a risk for the investors, notably in road projects. Although the Korean legal system originally didn't allow the private sector to get property rights on public properties, a very special measure which has been taken by this country is the right to use facilities like being a property right (ownership or leasing) making it easier for the project investors to raise funds.

The Korean government supports the acquisition of projects sites if necessary. The state and local governments may purchase the land on behalf of a project company (which is highly appreciated by the private investors). It reduces cost of the project and accelerates the implementation **process**[8].

As a result of an improved PPI regime, bank financing of PPI projects increased substantially, from KRW 20 trillion in 2002 (USD 26 billon) in comparison to KRW 2.5 trillion (USD 2.06 billion) in 1995 when the first PPI legislation was enacted).

Legal Issues and Institutional Arrangements

The Korean PPI Act and its Enforcement Decree of 1998 clearly states the requirements for both public and private sectors. They provide the details of the processes of project selection and contractor bidding. They outline the project implementation procedures and prescribe the maximum period of each process as well as the contents to be included in proposals. In Korea, rules and procedures applied to the procurement of PPI projects

7 Regarding the possibilities to terminate the concession, the private sector can only invoke "force majeure" or bankruptcy.

8 This buy-out right is applicable when the construction is suspended for six months or more or when the total investment cost increases by more than 50 percent.

are influenced by a legacy of civil works procurement. It is also based on a two-stage bidding process now.

Regarding the criteria for the projects' selection, the central government presents an Annual Plan which gives principles for each PPI project. Within a year, the authorities have to announce a Basic Private Investment Plan for each project.

This one shall include seven major requirements of the proposals, including the amount and duration of investment, construction details, eligibility of the concessionaire, the method used (BOT, BTO, BOO or other), subsidies, information on the operation and maintenance and the eligibility requirements for the concessionaire.

The implementing agencies designate the projects in relation with the government's medium-term public investment program (as "priority projects"). The Decree of 1998 shows nine aspects of the evaluation, including composition of the implementing authorities, project feasibility, financial plan, land's purchase plan and management abilities. The director of PIMAC (previously called PICKO) can designate members of the evaluation team.

Dealing with the process of negotiation, the competent authority shall designate the concessionaire and prepare a concession agreement. According to the legal procedures, the concessionaire shall prepare a detailed engineering and design plan for implementation and shall obtain the approval from the competent authority. These necessary contents of a concession agreement are given in the Annual Plan.

Public authorities are sometimes approached directly by private companies who submit projects for which no selection procedures have been opened. These proposals are called the "unsolicited" ones. They may result from the identification of a necessary infrastructure which may be financed by private funds.

They have been promoted by an incentive governmental procedure that allows a contracting authority to negotiate them directly with their initiators in a fair competition. In the view of awarding contracts, a competitive screening is necessary through a special procedure which differs from the treatment of solicited projects.

The **PIMAC**[9] is a special organization which has been created to provide support services in various fields of PPI projects (like feasibility studies of unsolicited projects which are all subject to evaluation by this central organization). Its support for the negotiation and conclusion of concession agreements is particularly appreciated by the foreign investors who are not familiar with the Korean language and the local system.

Another important function of this institution is to assist the Korean government in formulating policies related to PPI. This is carried out through various research or advisory activities of the Government.

9 Its roles and functions are given in more detail on the website of the Korean Ministry of Land, Transport and Maritime Affairs (www.moct.go.kr).

A further important institution is the Korean Infrastructure Guarantee Fund (KICGF) set up under the 1994 PPI Act. This body is funded from a mix of sources including directly by government, MRG fees, guarantee fees and bank loans. It provides guarantees for debt or revenues in PPP projects up to about USD 200 million per project.

In the ten years to 2005, the KICGF had provided guarantees for 65 projects for an accumulated amount of over USD 3 billion. The fund guarantees, for example, that if revenue is insufficient, even though the MRG has guaranteed the amount, the KICGF will ensure money is available on time to the project sponsor. This fund therefore gives great security (and comfort) to investors.

Recent trends in PPP for Highways

As stated above, the PPI Act (article 1) clearly states that its purpose is to contribute to the development of the national economy by encouraging private sector investment in infrastructure facilities. This is the reason why incentives have been prepared to attract foreign investors.

In 2001, the Korean government formulated the ten-year plan for PPI with the main objective to provide a clear overview to the private sector concerning prioritized areas of investment (such as roads). This PPI plan includes a list of 179 selected possible projects to be financed by the private sector from 2002 to 2011.

In the road sector more specifically, a total of 80 projects were selected including ten expressways, four bypass roads and four local roads. This plan is to be revised every three years in order to be more adapted to the PPI market.

In 2006, the Ministry of Planning and Budget formulated fiscal guidelines and strategies for the sustainable development of PPI up to 2015.

By 2020, seven new North - South corridors as well as nine new East- West corridors are planned to be realized. The Government plans to have 6,400 km of highways in 2020 (in comparison with the existing **3,100 km**[10]).

It has also to be stated that in October 2007, North and South Korea signed a peace agreement on eight main issues including renewal of highways.

For example, two major highways are already under construction: the AH1 highway (500 km) linking Japan, South Korea, North Korea and China and the AH6 highway (407 km), linking **Japan, South Korea, North Korea and Russia**[11].

10 These national highways have mainly four lanes (75%); the remainder (25%) have six or eight lanes.

11 The first one is almost completed in South Korea except the 30 km between Seoul and Munsan which is under consideration for private investment. The second has only a small completed part around Gangneung at the north of which 51 km are under completion (they should be completed in 2009). Moreover 40 km. should be completed this year in the South East, the remaining parts are under consideration, under planning or are being re-examined. They mainly utilize an existing highway (the Gyoungbu one) for AH1 and the 7th national road for the AH6. So, new constructions are not really

Conclusions and Lessons learnt

A growing economy creates massive demand for infrastructure facilities and Korea places high priority on sustainable development of the country for which the provision of adequate infrastructure facilities is crucial.

This country has enacted a comprehensive law to be regarded as a political commitment to push forward PPI. Clear rules and criteria have been set at each stage of the PPI process and a special procedure has been settled to accept and encourage unsolicited proposals. To complete this framework, effective organizations have been established to promote and coordinate PPI.

A main lesson from this country is that in order to develop PPPs, initial arrangements may well not have been ideal. The Government of Korea has learnt lessons from its earlier experience and has established a more transparent and effective PPP framework. By defining clear responsibilities between the different authorities and by including various forms of government support, the specific law in 1999 has accelerated PPI. The importance of monitoring PPP programs and having flexibility to adjust as programs mature and experience learned is thus important.

Since the enactment of this PPP policy in Korea, many infrastructure projects have been initiated through private participation. Private investment increased from KRW 300 billion in 1995-1997 to KRW 3.2 trillion (USD 3.2 billion equivalent) in 2006. The share of private investment to Government investment in infrastructure increased from 1.2% in 1996 to 17.4% in 2006.

By June 2007, the total project costs of signed BTO projects amounted to KRW 42.1 trillion. Almost 50% of this relates to 17 signed road contracts with a total investment of KRW 19.8 trillion. The average cost of those projects was KRW 1.2 trillion (about USD 1 billion) and they have, mostly, a 30 year concession period. In addition, 12.1 trillion KRW were invested in BTL projects.

South Korea is now an attractive country for private investment in infrastructure sectors. This country has been a pioneer in PPP; Build-Transfer-Operate and Build-Transfer-Lease type projects are now actively implemented. By adapting its PPP system as well as its experience on project construction capability, it has contributed to meeting increasing demand for infrastructure in the Asian Pacific Region.

But the PPI procurement is a long, complex and politically sensitive process which still has to be improved in order to gain competition. According to Noumba and Dinghem (2005), Korea should now focus on developing an efficient market as regard to its **construction industry**[12]. More importantly, Korea should now adopt a more efficient

required for those additional roads. Only adding AH route signs to existing plates should be completed and additional services should be planned.

12 The Korean market is dominated by five construction and engineering firms (in 2005) and the participation of foreign firms is very limited.

procurement process for its PPI projects especially regarding the effective capacity of its institutions which organize **bidding processes**[13].

Further information

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13 There is a too limited competition in tenders and a too high number of unsolicited proposals.