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Part 1: Country Report

Korean Economy and Construction Industry

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1. Executive summary

The Korean economy has successfully passed through the global financial and economic crisis, even if it is currently struggling in domestic demands and exports. The Korean economy is expected to be positive growth, but its pace might slow down.

During the first half of 2011, construction industry has seen an increase in activity owing to the recovery in civil (infrastructure) construction and residential buildings compared to last year. The number of employees in construction has especially increased of the growth in short-term employed workers. Total exports in construction, though a relatively fast recovery in 2010, have dropped by about half level from last year because of falling in Architecture and Plant sectors. Thus, Construction investment is expected to decrease in 2011 conflicting results of the previous year. Therefore, a rate of Korean economic growth in 2012, that is projected to be 4.6%, would be difficult to reach.

2. Macro Economic Review and Outlook

2.1 Overview of National Economy

The Korean economy has successfully passed through the global financial and economic crisis, even if it is currently struggling in domestic demands and exports. Amid a continued stabilization in the financial markets, the Korean economy showed a rapid recovery in domestic demands helped by improving terms of trade and stabilizing inflation. However, a recent Europe's financial crisis has suppressed again the domestic demands. The slowdown of the Korean economy is expected to continue, but it will succeed in making a soft landing through increased exports.

2.2 Main Economic Indicator

The Korean economy posted a better-than-expected 0.3 percent growth in 2009, and it had greatly been up to 6.2 percent in 2010, riding on brisk exports and recovering domestic demand. The GDP growth in the first half of 2011, however, was recorded by 3.8 percent, which means that the Korean economy has been at a standstill.

In the first half of 2011, overall consumption showed a slight decline, and private consumption was also decreased by a drop of the nondurable goods like cosmetics, food and beverage, despite the strength of smart phone and automobile demand. Exports, which account for about 50 percent of GDP, steadily jumped and private spending was on the gently rise.

On the production side, the manufacturing sector increased by 8.4 percent, which was mainly due to the sharp increase of exports including automobile and electric and electronic manufacturing. Whereas, the construction sector was sharply decreased by -8.6 percent in the second quarter of 2011 compared with -0.1% in 2010.

Labour force growth rate is increasing to 3.39% in the second quarter of 2011 from 1.37% in 2010, and the rate of unemployment declined from 3.7 in 2010 to 3.4 in the second quarter of 2011.

Some of economic indicators are still at considerably low levels, thus, it is too difficult to say that economic has been completely recovered. However, the major credit rating agencies take an optimistic view of Korean economy despite downgrading the most developed countries' rating. The Korean economy is expected to be positive growth, but its pace might slow down.

Table 2.1: Main Economic Indicator

	2004	2005	2006	2007	2008	2009	2010	2011.2Q
GDP and Components								
GDP at real price (bill. won, base year 2005)	832,305	865,241	910,049	956,515	978,499	981,625	1,042,111	525,534
GDP at current market price (bill. won)	826,893	865,241	908,744	975,013	1,025,452	1,065,037	1,172,803	597,379
GDP growth (%)	4.6	4.0	5.2	5.1	2.3	0.3	6.2	3.8
GDP growth (%) for agriculture, forestry and fishery sector	9.1	1.3	1.5	4.0	5.5	1.6	-4.3	0.9
GDP growth (%) for manufacturing sector	10.0	6.2	8.1	7.2	2.9	-1.5	14.8	8.4
GDP growth (%) for services sector	2.3	3.5	4.4	5.1	2.8	1.2	3.5	2.6
GDP growth (%) for mining sector	-0.4	-0.4	-0.1	-4.1	1.3	-1.6	-7.7	-6.7
GDP growth (%) for construction sector	2.0	-0.3	2.2	2.6	-2.5	1.8	-0.1	-8.6
Demographic Indicator								
Population (1000 people)	48,039	48,138	48,297	48,456	48,607	48,747	48,875	48,988
Population growth rate (%)	0.38	0.21	0.33	0.33	0.31	0.28	0.26	0.23
Labour force (1000 people)	22,557	22,856	23,151	23,433	23,577	23,506	23,829	24,636
Labour force growth rate (%)	1.89	1.33	1.29	1.22	0.61	-0.30	1.37	3.39
Unemployment rate	3.7	3.7	3.5	3.2	3.2	3.6	3.7	3.4
Inflation rate (CPI)	3.6 (97.32)	2.8 (100.00)	2.2 (102.2)	2.5 (104.8)	4.7 (109.7)	2.8 (112.8)	2.9 (116.1)	4.2 (120.6)
Financial Indicator								
Inter bank interest rate	3.66	3.35	4.14	4.65	4.77	1.92	1.90	3.21
Short term loan interest rate (Yields on CD(91-day))	3.79	3.65	4.48	5.16	5.49	2.63	2.67	3.53
Long term loan interest rate (Yields of Treasury Bonds (3-year))	4.11	4.27	4.83	5.23	5.27	4.04	3.72	3.65
Average change against USD$	1,144	1,024	955	929	1,102	1,276	1,156	1,081

3. Trading Country

3.1 Value of Import and Export

Goods account was recorded a surplus of $41.1 billion in 2010, and $15.7 billion in the second quarter of 2011. The trade surplus in 2010 was due to the sharp increase of export exceeding the increase of import. During the first half of 2011, export grew by 23.7%, and import increased of 26.7% compared to the same period last year. The goods export in 2011 is being forecasted to increase about 21.1% due to the effects of automobile market recovery in American and the infrastructure investment in India, Brazil and Russia etc. Also import is expected to growth in 2011, supported by increases in the price of raw materials and recovery in domestic demand.

Table 3.1: Export and Import

(unit : bill. US$)

	2004	2005	2006	2007	2008	2009	2010	2011-2Q
Export	253.8	284.4	325.5	371.5	422.0	363.5	466.3	273.7
(increase rate)	(31.0)	(12.0)	(14.4)	(14.1)	(13.6)	(-13.9)	(28.3)	(23.7)
Import	224.5	261.2	309.4	356.8	435.3	323.1	425.2	258.0
(increase rate)	(25.5)	(16.4)	(18.4)	(15.3)	(22.0)	(-25.8)	(31.6)	(26.7)
Balance of trade	29.4	23.2	16.1	14.6	-13.3	42.6	41.1	15.7

Source: Korea Foreign Trade Association

3.2 Five Major Trading Countries

The major trading countries of Korea in the third quarter of 2011 are China, Japan and America. Middle East Asia countries including Saudi Arabia are the major countries of import, as about 80% of oil import of Korea is from these Middle East countries. Hong Kong and Singapore are also included in the 5 major countries of export in the third quarter of 2011. A share of Asian Countries in the trading to Korea has increased.

Table 3.2: Top 5 Major Trading Countries of Import and Export (3Q, 2011)

(unit : mill. US$)

Rank	Import		Export	
	Country	Value	Country	Value
1	China	65,075	China	99,542
2	Japan	51,711	America	41,613
3	America	33,775	Japan	29,305
4	Saudi Arabia	27,274	Hong Kong	22,773
5	Australia	19,375	Singapore	15,744

About 40% of the exports came from automobile, electronic IC(integrated circuit), ships, liquid crystal device, petroleum products and Cordless Telephone. Import products of Korea is mainly consisted of oil that is about 15% of total import, and electronic IC, petroleum products, gas and unalloyed steel goods is major import products.

4. Overview of construction industry

4.1 The Value of Construction Contracts

Until 2007, the construction business has risen helped by buoyant housing business, regardless of government's strong regulation of real estate market. And thus residential building construction was increased in the nation wide, especially apartments in local cites. It resulted in oversupply of housing construction and an unsold apartment has increased in local areas. With the spreading global financial crisis by sub-prime mortgage in America, domestic housing business was also greatly shrunken in the end of 2007.

Non-residential building and civil engineering business sectors rose owing to macro economic growth in 2007, but non-residential building fell sharply with economic recession affected by global financial crisis in 2008. In 2009, the growth rate of residential building construction contract was recorded -12.5% year on year and that of non-residential building construction contract was shrunk by -25.4%.

Since early 2008, the expansionary policy to economic recovery has led the government expenditure to rise rapidly, letting the investment in construction, mainly for infrastructure projects, to rise fast. Over 2009, the growth rate of civil construction sector registered 31.2% increase, but total construction contract rate was decreased by 1.1% from the previous year on year, offset by a large fall of private projects. In 2010, only non-residential construction contract recorded plus growth rate of 18.6 percent.

Fortunately, the construction contract in August, 2011 showed positive growth of 1.0 percent, reaching a value of KRW 64.87 trillion (US$ 57.50 billion). Reasons for the positive growth rate include the residential buildings recovered from negative growth, rising from -19.1% to 1.5%, and the civil (infrastructure) buildings reduced the decreasing rate, from -23.5% to -7.8%, with the previous year.

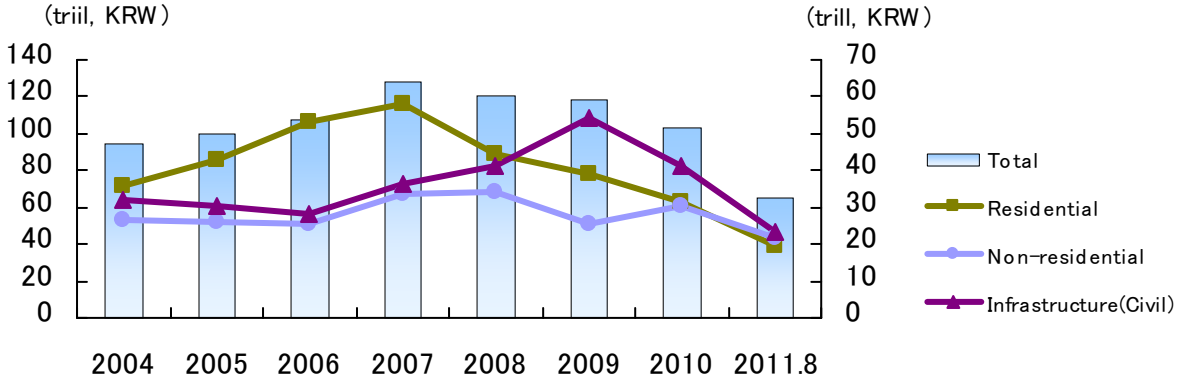

Figure 4.1: The Value of Construction Contracts (2005~2011)

Table 4.1: The growth rate of construction Contract

(Unit: %, compared with the same period)

year	total	civil(Infra)	residential	non-residential
2003	23.2	10.5	44.6	10.1
2004	-7.7	0.9	-21.0	5.2
2005	5.1	-5.7	20.6	-2.6
2006	8.0	-6.6	23.9	-1.2
2007	19.2	27.5	9.1	30.8
2008	-6.1	14.0	-23.2	1.8
2009	-1.1	31.2	-12.5	-25.4
2010	-13.0	-23.5	-19.1	18.6
2011.8	1.0	-7.8	1.5	11.8

Table 4.2: Breakdown of Construction Contracts

(Unit: bill. won, current price).

Type of Contract	2004	2005	2006	2007	2008	2009	2010	2011.8
Public Project								
Residential building	3,172	3,853	5,122	7,570	9,346	7,378	4.738	1,721
Non-residential building	7,332	7,001	5,755	7,587	9,149	8,327	7,749	4,840
Infrastructure	23,261	20,972	18,643	21,932	23,354	42,782	25,749	12,244
Sub-Total	33,765	31,826	29,519	37,089	41,849	58,487	38,236	18,805
Private Project								
Residential building	32,496	39,155	48,155	50,578	35,311	31,699	26,875	18,053
Non-residential building	19,349	18,978	19,905	25,984	25,021	17,161	22,486	16,949
Infrastructure	8,963	9,425	9,740	14,261	17,904	11,366	15,631	11,060
Sub-Total	60,808	67,559	77,799	90,823	78,236	60,227	64,993	46,064
Total								
Residential building	35,668	43,009	53,276	58,148	44,657	39,078	31,613	19,775
Non-residential building	26,680	25,979	25,660	33,571	34,170	25,488	30,235	21,789
Infrastructure	32,224	30,396	28,383	36,193	41,258	54,149	41,380	23,304
Total	94,572	99,384	107,318	127,912	120,085	118,714	103,229	64,870

Source: Construction Association of Korea

4.2 Construction Companies

4.2.1 The number of Contractor by Type

Since 2006, the number of construction companies has slightly increased to 56,691 firms in July 2011. The number of General contractors is 11,796 firms, 20.8% of total firms and 68.0% is Specialized trade contractors. During that period, the number of general contractors has kept decreasing from 13,202 firms in 2005, to 11,796 in July 2011. By contrast, Specialized trade

contractors and Equipment work contractors, which are mostly small and medium firms, increased steadily.

The reason why numbers of small construction company has increased is that competitive bidding is more severe in public project market. And this bidding system for small public project is insufficient to discriminate, more paper companies participated in that bidding.

Table 4.2.1: Statistics of Construction Company

Classification \ Year	2004	2005	2006	2007	2008	2009	2010	2011.7
Number of general contractors	12,988	13,202	12,914	12,842	12,590	12,321	11,956	11,796
Specialized trade contractors	32,990	35,547	35,040	36,422	37,106	37,914	38,426	38,561
Equipment work contractors	5,338	5,505	5,387	5,478	5,768	5,994	6,151	6,334
Total	51,316	54,254	53,341	54,742	55,464	56,229	56,533	56,691

Source: Construction Association of Korea

4.2.2 The number of contractors by employment size

About 92% of construction firms are small companies that employed below 50 workers, about 7% is construction firms hiring employee between 50 and 300, and large firms having 300 over of workers are just below 1%. Share of firms according to employment size has not changed apparently since 2004.

Table 4.2.2: The share of Contractors by Employment Size (%)

Classification \ Year		2004	2005	2006	2007	2008	2009
Total	Total	100	100	100	100	100	100
	1-49	89.0	90.2	90.5	89.7	91.8	92.1
	50-300	10.3	9.1	8.6	9.4	7.4	7.1
	300 over	0.7	0.7	0.9	0.8	0.8	0.7
Number of General Contractor	Total	100	100	100	100	100	100
	1-49	98.6	98.7	98.5	98.8	98.9	88.6
	50-300	1.0	1.0	1.1	0.8	0.7	10.3
	300 over	0.4	0.3	0.4	0.4	0.4	1.1
Specialized Trade Contractors	Total	100	100	100	100	100	100
	1-49	87.1	88.6	88.6	87.8	92.3	92.9
	50-300	12.1	10.7	10.4	11.3	7.0	6.5
	300 over	0.8	0.8	1.0	0.9	0.7	0.7

4.3 Employees and Construction Labors

4.3.1 The number of construction worker by job type

The number of workers shows an up-and-down pattern in the construction industry. For the year of 2007, more than 1.8 million employees worked in the construction field, 7.9% of total employment. But the number of workers in 2008 declined slightly with construction business slowdown compared to previous year. And it sharply fell by 1.72 million workers in 2009, when Korean economy was in the deepest recession affected by global financial crisis. In 2010, the number employed in construction increased slightly owing to the growth in the economically active population. However, the number of employee in July 2011 has already achieved the similar level with the previous year.

It is difficult to see the latest trend by job type, since the data about the number of construction workers by job type is only available till 2009, as below Table 4.3.1b shows. The number of building construction workers increased amid buoyant housing and building business from 2004 to 2006.

Table 4.3.1a: The number of workers in Construction

Year / Classification	2004	2005	2006	2007	2008	2009	2010	2011.7
Number of employee in construction (thousand person)	1,820	1,813	1,833	1,849	1,812	1,720	1,753	1,754

Source: Korea National Statistical Office

Table 4.3.1b: The number of Construction Worker by Job Type

Unit: thousand workers

	2003	2004	2005	2006	2007	2008	2009
Construction	1,719	1,737	1,718	1,717	1,728	1,657	1,661
General construction	589	562	571	579	576	529	491
Heavy construction	177	174	176	161	162	157	196
Building construction	412	389	395	417	414	372	294
Special trade construction	1,130	1,175	1,147	1,138	1,151	1,127	1,170
Engineering and building	485	504	475	482	477	469	465
Building installation	174	185	183	170	165	165	169
Electrical & communication works	255	256	252	246	265	258	290
Building completion	216	230	236	239	243	233	246

Source: Construction Association of Korea

4.3.2 The number of foreign construction worker by job type

There is little statistics about the number of foreign construction worker in Korea, because the foreign firms making business of construction in Korea is very few.

4.4 Productivity

4.4.1 The Value added per employee

The index of value added product per employee was changed into 100 in 2008, therefore we suggest the figures since 2008. The table 4.4.1 shows the value added per employee in construction 2010 dropped into 95.0.

However, the past data showed that value added product per employee in construction industry was gradually increased since 2004, even though dropped by 0.1 million won from 33.6 million won in 2008 to 33.5 million won in 2007. But the relative value added product per employee in construction compare to manufacturing sector has become smaller since 2004, registered by 52% in 2008 from 69.6% in 2004. This rate is disappointing, since service sector industries showed gradual increase such as 2%p increase in 2008 from 36.1% in 2006.

Table 4.4.1: The Value Added per Employee

(unit : %)

	2008	2009	2010
Construction	(100.0)	(108.1)	(95.0)
Manufacturing	(100.0)	(101.5)	(112.1)
Service	(100.0)	(98.8)	(105.3)
Primary sector	(100.0)	(99.7)	(107.1)

Source: Korea National Statistical Office

4.4.2 Physical measurement of construction productivity

We don’t have the adequate data standing for physical measurement construction productivity, since there is no labor input data classified by construction types.

4.5 Construction Cost

4.5.1 Major construction material average price

The official prices of major construction materials are influenced by government guideline but actual transaction value changes according to the market conditions. The demand and supply of most of the construction materials can be more or less matched domestically. Shown as table 4.5.1, the price of the most construction materials has not been much changed since 2003, except Steel bars. In Jun 2008, the price of Steel bar rose to about one million (Korean won per ton), almost twice, from the previous year 526,500 won. Because the raw material of Steel bar mainly depended on import, the price was influenced by international market situation. The price of steel bar came down to 811,000 won in 2010 from 888,500 won, the average price in 2008, and it is still rising up to 995,000 won in September 2011.

Table 4.5.1 : Average Construction Material Price

RMC * kg/cm^3 (won per^3)	Cement in bulk (won per 40kg)	RMC * kg/cm^3 (won per m^3)	Steel bars (won per ton)	20mm aggregates (won per m^3)	Concreting sand (won per m^3)	Common Bricks (won per thousand pieces)
2003	3,333	55,543	382,750	11,000	12,000	48,000
2004	3,404	53,827	515,917	12,250	13,000	46,000
2005	3,387	51,708	498,583	14,167	13,083	46,000
2006	3,370	49,080	455,667	11,333	13,250	45,000
2007	3,370	49,080	526,500	11,500	13,083	45,000
2008	3,370	51,248	888,500	12,417	12,000	45,000
2009	4,000	51,970	741,000	12,000	13,000	45,000
2010	3,800	54,670	811,000	12,000	13,000	50,000
2011.9	3,800	51,430	995,000	12,000	13,000	50,000

* RMC: Ready Mix Concrete

Source: KPC (Korea Price Information Corp)

4.5.2 Construction industry salaries and wages

For chief workers, the salaries and wages have mildly increased since 2003. But special daily workers experienced the negative wage growth due to the decreased construction demand during 2003~2004. In September 2011, the average wage per day for chief workers was 100,879 won (about 90.64 dollars), 95,366 won (about 85.68 dollars) for special daily wage, and 74,008 won (about 66.49 dollars) for normal daily wage.

Table 4.5.2: Salaries and Wages in the Construction Industry (Korean won)

	2003	2004	2005	2006	2007	2008	2009	2010	2011.9
Chief worker	69,644	70,184	73,402	78,124	81,700	85,203	90,889	95,671	100,879
Special daily wage	66,596	66,504	68,917	73,572	79,027	81,596	84,862	89,835	95,366
Normal daily wage	52,429	52,575	54,171	57,321	59,715	63,530	68,437	70,497	74,008

Source: CAK (Construction Association of Korea)

4.6 Import and Export of Construction Work

4.6.1 Annual exports of construction work

Total exports in construction were 37,524 million dollars for the third quarter of 2011, this amount is relatively small compared to last year. Such a tremendous increase was experienced in 2010 because the United Arab Emirates (UAE) nuclear power plant contract signed at the end of 2009 was brought into 2010 calculation. The 18.6 billion dollar UAE project accounted for most of the increase in the amount.

Among them, industrial construction exports (Plant) occupied the largest portion recording 26,454 million dollars, which was much higher than any other country. The export of Civil engineering and Architecture construction sectors was recorded 4,475 million dollars and 4,723 million dollars respectively.

Construction import has not been recorded yet.

Table 4.6.1: Annual Exports of Construction Work

year	Total	Contract Amount by work type(million US$)					
		Civil	Architecture	Plant	Electric	Telecomm	Engineering
2011.9	37,524	4,475	4,723	26,454	813	54	1,005
2010	71,578	4,124	7,724	57,285	770	458	1,217
2009	49,147	5,746	6,273	35,692	756	20	660
2008	47,640	9,364	9,192	26,764	1,336	19	965
2007	39,788	5,232	8,177	25,268	690	41	381
2006	16,468	1,532	3,433	10,920	474	3	106
2005	10,859	836	1,226	8,263	374	13	147
2004	7,498	806	874	5,182	545	3	89
2003	3,668	402	532	2,491	192	8	43

Source: ICAK (the international Construction Association of Korea)

4.6.2 Five major foreign markets by value

Middle-east Asian countries are usually included in top five countries for construction export of Korea. In 2010, the U.A.E and Kuwait were the highest countries in construction exports, in addition, Vietnam and Australia newly entered into the five major export countries. The export of construction service to middle-east Asian countries is mainly plant construction sector and the service to south-east Asian countries is infrastructure or architecture construction sector.

In 2010, the U.A.E was the most important country in construction exports, where 25,602 million dollars of construction service was exported. Saudi Arabia (10,531 dollars), Kuwait (4,893 dollars) Vietnam (3,298 dollars) and Australia (3,246 dollars) followed.

Table 4.6.2: Top Five Countries for Construction Export

(unit : million US$)

Rank	2006		2007		2008		2009		2010	
	Country	Value	Country	Value	Country	Value	Country	Value	Country	Value
1	Saudi Arabia	3,624	U.A.E	5,585	Kuwait	7,540	U.A.E	15,860	U.A.E	25,602
2	Kuwait	1,982	Libya	5,450	U.A.E	4,841	Saudi Arabia	7,203	Saudi Arabia	10,531
3	Qatar	1,314	Saudi Arabia	5,055	Qatar	4,400	Algeria	3,727	Kuwait	4,893
4	Oman	1,267	Singa-pore	3,178	Saudi Arabia	4,122	Libya	3,134	Vietnam	3,298
5	Vietnam	1,153	Egypt	2,081	Singapore	2,917	Iran	2,492	Australia	3,246

Source: ICAK (the international Construction Association of Korea)

5. Construction Outlook 2010 / 2011

During the recent financial crisis, Korea's GDP growth fell, and the growth rate was only 0.2 percent in 2009. In 2010, however, the rate rose to 6.8 percent with economic activity increasingly led by the private sector. The recovery was led by the rebound in fixed investment and the turning of the inventory cycle. Nevertheless, the growth rate in 2011 is projected to drop below 4.3 percent with the stagnant domestic economy and the financial crisis triggered by Europe. The low rate in this year will make it hard for next year's growth rate to reach the mid 4 percent level.

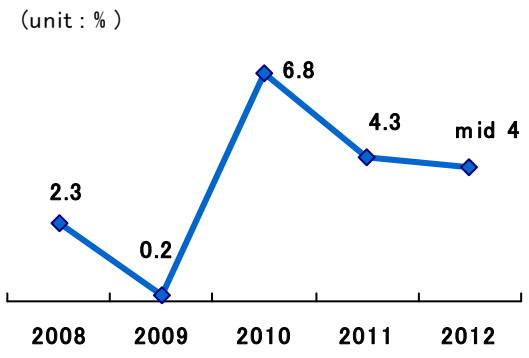

Figure 5.1: Korea's GDP growth

It is expected that the growth rate in construction investment in 2nd half of 2011 would reach 1.4%, and the annually rate be about -3.5. The investment in civil engineering will grow 4.4% in 2nd half and -2.9% annually, considering the exhaustion of the reserved power for a financial investment in 2009.

Table 5: Prospect of Construction Investment in 2011

(Unit: %, compared with the same period)

Segment	2010 annually	1st half of 2011	2nd half of 2011	2011 annually
Construction Investment	1.4	-8.9	1.4	-3.5
- Civil Engineering	2.3	-11.3	4.4	-2.9
- Building	1.0	-16.5	0.8	-6.0
Residential	0.4	-21.4	3.6	-16.5
Non- Residential	1.4	-11.6	4.6	4.6

Source: Construction Economy Research Institute of Korea

The government of Korea plans to strengthen its investment for healthcare, welfare and the research of new growth engines, while cutting the budget for social overhead capital including road construction in 2012. Budget spending for the healthcare, welfare and labor sector was raised by 5.6 trillion won from this year to 86.4 trillion won, the biggest increase by amount, but social overhead investment was cut by 7.4% (1.8 trillion won) to 22.6 trillion won.

Construction investment is forecasted to record around 1.1% growth rate in 2012. Public construction projects is expected to drop about 4% due to next year`s smaller budgets, and private sector also is projected to decrease.

A Review on the PPP in Urban Development in Korea

- Focusing on the PIPF(Publicly Invited PF) Project -

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1. Introduction

The need for the PPP(Public Private Partnership) has increased continuously in urban development field. Because the environmental conditions surrounding urban development has been changed greatly and the practical use of PPP has expanded globally in recent years.

The PPP related with urban development proceeds in two-way fashion in their mutual roles. The way the private participates in the public sphere and the other way the public intervenes in the private sphere are becoming simultaneously active.

Generally, private-public urban development project designates the former. The case of the latter is still not clear. It is of the same concept used in the American PPD(Public Private Development), and is the method in which public organizations participate directly and widely in various stages of planning and development processes of urban development projects and promote them. In Korea as well, as the necessity of adopting the cooperative type urban regeneration project gets conspicuous, such project is evolving into a public-private one.

Among PPPs, unlike the case of private investment project in SOC for which has a clear legal system, there is no established legal system for PPP projects related with urban development. This paper examined PPP urban development projects in which the private participation in public sphere is increasing, and PIPF(Publicly Invited PF) Projects which is typical PPP urban development project.

2. The Characteristics of PPP in Urban Development

Conceptually, the PPP designates allowing the private to participate in public services which was previously taken by the public sector. The reason for doing this is financial constraints and organizational inefficiency of the public sector.

The PPP has settled down as the general project promotion method since the 1980s. In Korea, private investment project has been activated which is what the government support the private businesses for their investment in SOC.

There is a conceptual difference between traditional PPP and that in urban development. The core of PPP project is that the private sector provides public service or the private sector and government jointly do it. However, since the urban development itself is not public service, the simple fact that the private sector participates in urban development cannot be considered as PPP project.

However, in Korea, the public role has been taken seriously in urban development, to promote housing supply. Urban development activities such as housing site supply, housing site preparation, and new town development have been considered as the role of the public. Considering these practices, PPP project in urban development can be defined as what the private and the public cooperate as real principal agents in overall urban space making.

3. The Types of PPP in Urban Development

The PPP in urban development is the project where the private is allowed to participate in the public sphere either by joint investment or joint promotion. There are three types of it.

The first type is the PIPF project which is the one performed per project through SPC. This is the type where the public provides land and the private constructs housing, and pays back the land price by selling houses.

The second type is the joint housing site development project following the 'Housing Site Promotion Law', in which the private and the public jointly perform housing sites development. It was adopted in April 2007 with the purposes of promoting the project rapidly and reducing sale prices of built houses as well as making use of private potentials in public housing site development.

Criteria for land space for the joint housing site development project is over 10,000㎡ in urban areas, and over 30,000㎡ in non-urban areas. The private company should first secure land space over the minimum requirements and can apply for this kind of project by suggesting the public to perform it jointly. Demonstration projects have been implemented in three districts since December 2007. However, there has been few participation of the private in this kind of projects mainly because of their lack of knowledge on it.

The third type is called the third sector project based on 'The Local Public Enterprise Law'. It was adopted in 1992 to develop local regions and to expand financial resources of local governments, as the local self-governing system was being implemented in those days in an increasing scale. It is a stock company where the local government invests less than 50% and is available for housing project and land development project. Though there are 29 corporations of this type as of December 2009, they are not used in urban development.

4. PIPF(Publicly Invited PF) Project

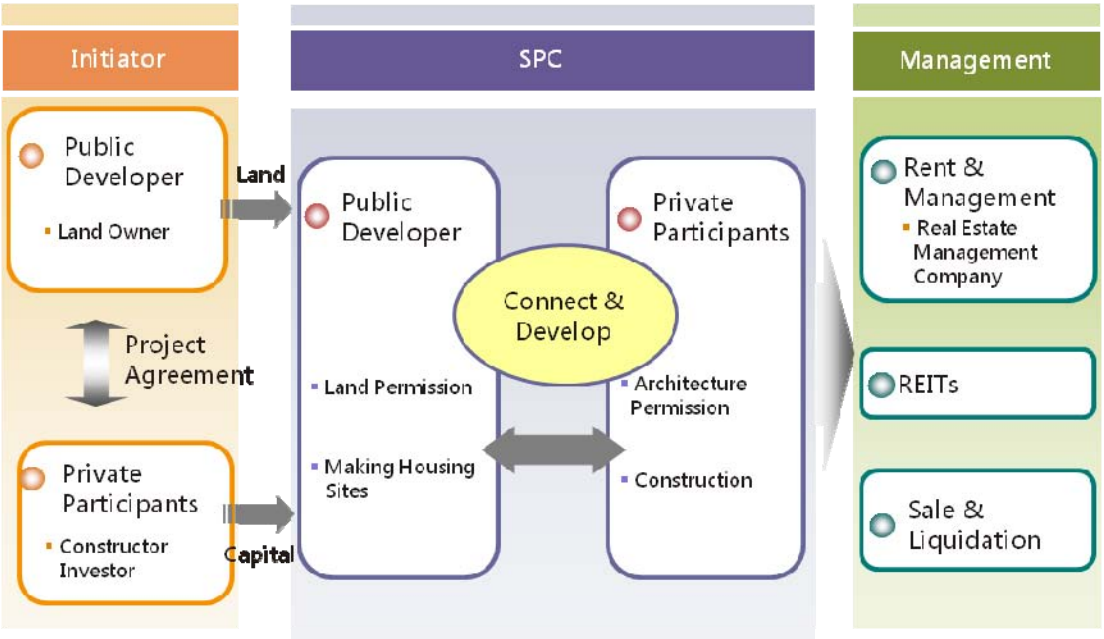
4.1 Concept

The PIPF project is the PPP project in urban development used most actively in Korea. At first, for a specific site the public holds, the public recruits the private companies by public contest to do the development project. Then, the public and the chosen company (or companies) establish a SPC by joint investment, which implement the development project.

The private supplies ideas like project plans and capital, and the public helps the company by providing land capital and supports the company for the matters regarding approval and permits of the project. Unlike traditional PF development projects, it can be

called the unique private-public development project utilizing PF, and can also be called as SPC type real estate development project.

<Figure> The structure of PIPF project



The PIPF project is in principle a win-win model in which synergy effect can be created by the combination of the public's know-how on housing site selection and the private's construction techniques.

<Table > Merits of the PIPF project

	Merits of the PIPF project
The Public	- It can develop creative and cubic urban space using the capital and ideas of the private - By constructing convenient facilities on time, it can serve residents and vitalize the area as early as possible - By inviting strategic multi-functional facilities, it can enhance the image of the urban center and meet self-sufficiency
The Private	- By the public's participation in the project, it can lower risk and secure project stability - With less burden of early investment money, it can easily secure profitability - By learning know-how on large-scale real estate development, it can contribute to advancement of the real estate market

4.2 History

The PIPF project was adopted as means of seeking efficiency in new town development for on-time provision of big-size complex facilities, and the unification of plan-construction, and management system. In the past new town developments, it was repetitive problems that, as the commercial district was later developed than the housing section, the completion degree of the development complex was low when residents entered their new houses.

To solve this problem, the LH(Korea Land & Housing) Corporation adopted the PIPF project in the near-station sector development of the Jookjun district, Yongin city for the first time in 1998. Subsequently, it has been used in many commercial district developments in housing site developments. For the land owned by the public, the type of regenerating the existing built-up area by linking it with redevelopment and urban center revitalization project has also been used.

<Table> The main PIPF project cases of LH Corporation.

Project name	Green City	Junwave	Metapolis	Smart City	Morning Bridge	Lake Park	Alpha Dome City
Project area	49,279㎡	44,310㎡	95,494㎡	170,529㎡	62,024㎡	33,537㎡	137,500㎡
Total floor area	267,157㎡	212,446㎡	812,502㎡	522,298㎡	25,934㎡	116,466㎡	1,216,010㎡
Total cost	USD 420 million	USD 380 million	USD 1,570 million	USD 935 million	USD 135 million	USD 220 million	USD 7,300 million
Land price	USD 100 million	USD 90 million	USD 280 million	USD 160 million	USD 43 million	USD 60 million	USD 2,140 million
Period	’02.1 ~ ’08.3	’03.5 ~ ’08.12	’04.4 ~ ’11.12	’04.6 ~ ’09.12	’05.6 ~ ’09.3	’06.12 ~ ’11.12	’07.12 ~ ’14.12
Facilities	department Store, officetel, etc	theater, educational facilities, etc	housing, hotel, broadcasting station, etc	housing, hotel, IBC, broadcasting station, etc	detached house, etc	shopping mall, multiplex, sports center, etc	shopping mall, department Store, office, etc

<Figure> Metapolis

<Figure> Alpha Dome City

4.3 General Situation

As of March 2009, 32 PIPF projects in total are being implemented. 94% of them (in terms of the project number) have been located within public housing sites. The proportion of those implemented in the capital area is 68%, over the half of the total. Though the projects were applied in capital area public housing sites in the beginning stage, they have spread into other cities.

<Table> The numbers of projects by year/region

	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
SMA*	1	1	1	1	1	5	9	4		23
Non-SMA				1	2	1	2	2	1	9
Total	1	1	1	2	3	6	11	6	1	32

* : Seoul Metropolitan Area

The average cost is 2.8 billion USD, and the land cost of the total cost is 25%. The average site size is 426,000㎡, and the average total floor area is 856,000㎡. In terms of the scale, the PIPF project had grown rapidly. As of late 2009, it is estimated that the market size of PIPF projects for which selecting processes for private companies were completed passed 90 billion USD.

4.4 Present Problems

However, since the financial crisis in September 2009, it has been in serious stagnation. In the case of existing projects, those which acquired business rights are in difficulty in financing and financial input caused by dissenting opinions of CI(construction investor) and FI(financial investor) in financial negotiations. In the case of new projects, the failures to select a company in a bid and the unlimited delay of planned projects have taken place.

Therefore, there have been few cases where projects have proceeded following the plans and schedules established at the time of public invitation. So, most of them have failed to achieve expected effects such as employment enlargement, revitalization of local economy, and increase of tourism demand, etc.

The direct cause why the PIPF project fell into crisis is the profit deterioration due to the following external factors: financial crisis, slump of real estate market, and the house sale price ceiling system, etc. The financial crisis blocked capital flow, causing real estate businesses to fall into slump. For real estate development projects, the real estate market slump made their profitability unclear. The uniform application of the house sale price ceiling system without considering characteristics of each project deteriorated their profitability to the extreme.

4.5 Introspection

Besides profitability deterioration due to external factors, internal defects those projects originally had also have caused the current crisis.

First, the lack of systemic management over projects led to the failure of prior response. The central government has neglected to administer projects. There have been problems such as too many similar PF projects across the country, lack of systematic administration, and insufficient examination of project validity. Lack of the management system made it difficult to respond actively to crisis at the beginning stage. Even today, it is still difficult to coordinate opinions among concerned interests.

And since there was no independent legal system for the PIPF project, those projects were carried out applying related laws and ordinances. When problems took place, there were not sufficient standards and criteria on which those problems could be solved.

Second, risk management and proper response to the exposed risk failed to be done. When the business environment was good before the financial crisis, neither public organizations nor construction companies established precise prediction of risk or made proper risk management plan. The unique characteristics that the ordering organization as contractor and stake-holder is the public body make it difficult to respond effectively to risks happening in the processes of project implementation.

There exists a specific risk derived from the reality that, unlike other projects, the ordering organization is the public body in the PIPF project, which makes it difficult for the ordering organization to perform a project only on profitability. While the characteristics of the project where the public body participates in as a project principal agent can lead the project to be a win-win model, it has potential to make it defective when external problems happen in reality.

5. Future Issues and Policy Direction

When we examine various kinds of PPP urban development projects as well as the PIPF project, they all have the following problems. In legal and institutional senses, they are not administered and supported systematically. And it is difficult for two parties to establish equal cooperative relationship in terms of sharing roles and risks.

To enlarge the quantitative scale and to improve the quality of private-public urban development projects, the most important problems are more active role of the government and systematization of laws and institutions.

First of all, it is necessary to establish a comprehensive legal and institutional system on PPP in urban development. An independent legal system should be made to rule comprehensively PPP in urban development. In the basic laws designating general principles and methods on PPP projects related with urban development, various project types should be included. It is also necessary to prevent unnecessary conflicts and work delay by standardizing various works related with PPP projects through standard contracts and standardized work manuals and by giving legal basis.

Next, it is necessary to consider establishing an official organization which will oversee PPP urban development projects. It is necessary, because there should be an organization to check and administer profitability and management achievements to solve the problems of special favors and corruptions in public projects. It needs also to function to

prevent problems that similar development projects emerge simultaneously at real estate boom times and to administer those projects systematically in larger regional scales.

The final important challenge is to seek a new project model. It is possible to implement it as a private investment project for which the legal and institutional system is already established. It is possible to devise a method to carry out SOC construction project and urban development independently and also connectively. It is possible to devise project models where, while public projects like official building construction and public rental housing development, etc. are implemented as the BTL(Build-Transfer-Lease) private investment project, enlarging their scale and a single principal agent carries out those projects simultaneously.