

# **Construction Economy Report**

**No. 49**

## **The Japanese Economy and Public Investment**

**The Structure of the Construction Industry,  
The Contribution to the Society**

**October 2007**

**Research Institute of Construction and Economy**

**(RICE)**

**Tokyo, JAPAN**

**This is an English translation of a summarized report in Japanese,  
announced in October 2007**

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## Chapter 1 Macroeconomics and Construction Investment

### 1.1 Trends in the Japanese economy and construction investment

- Corporate profits in general have been continuing to improve. The influence of the stronger business sector is expected to spread to the household sector. The Japanese economy will likely maintain its steady recovery, driven by stronger domestic private-sector demand. The expected growth rate in real terms will be 2.0% for FY2007 and 2.1% for FY2008.
- Construction investment posted its first year-on-year increase in ten years in FY2006. However, there is a declining undertone, largely due to the effects of a steady fall-off in public-sector construction investment even though private-sector non-housing construction investment may rise, reflecting the economic recovery. A slight year-on-year decline is expected for both FY2007 and FY2008.

#### ● Trends in the macroeconomy (FY)

FY	1990	1995	2000	2003	2004	2005	Actual← →Forecast		2008
							2006	2007	
Real GDP (Increase over previous year)	4,679,132 6.0%	4,827,495 2.5%	5,056,219 2.6%	5,177,145 2.1%	5,278,267 2.0%	5,404,296 2.4%	5,517,546 2.1%	5,630,116 2.0%	5,746,815 2.1%
Real private final consumption expenditure (Increase over previous year)	2,494,772 4.8%	2,737,642 2.5%	2,837,575 0.7%	2,930,691 0.6%	2,968,882 1.3%	3,024,922 1.9%	3,046,820 0.7%	3,102,316 1.8%	3,160,912 1.9%
Real private business investment in facilities (Increase over previous year)	904,887 12.0%	678,691 3.1%	729,631 7.2%	733,156 6.1%	779,038 6.3%	823,835 5.8%	888,938 7.9%	925,579 4.1%	971,584 5.0%
Real public fixed capital formation (Increase over previous year)	298,240 4.1%	406,024 7.5%	344,449 -7.6%	281,040 -9.5%	245,245 -12.7%	241,827 -1.4%	218,721 -9.6%	199,845 -8.6%	184,752 -7.6%
Nominal GDP (Increase over previous year)	4,514,728 8.5%	4,964,573 1.9%	5,041,188 0.9%	4,937,475 0.8%	4,982,754 0.9%	5,033,165 1.0%	5,104,207 1.4%	5,218,029 2.2%	5,351,543 2.6%

(Units: 100 million yen, real figures are chain-based with 2000 as a reference year)

● Trends in construction investment (Nominal, FY)

Actual ← | → Tentative | → Forecast

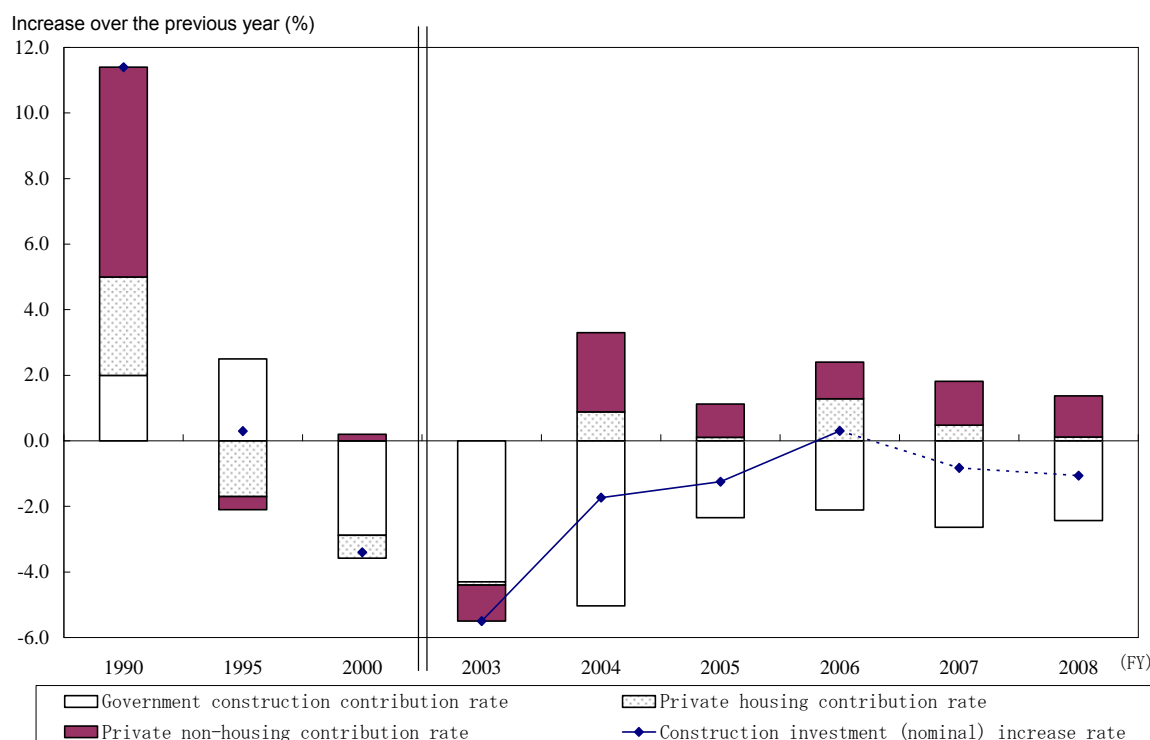
FY	1990	1995	2000	2003	2004	2005	2006	2007	2008
Nominal CI (Increase rate)	81,440 11.4%	79,017 0.3%	66,195 -3.4%	53,700 -5.5%	52,777 -1.7%	52,120 -1.2%	52,280 0.3%	51,850 -0.8%	51,300 -1.1%
Nominal government CI (Increase rate) (Contribution rate)	25,748 6.0% 2.0	35,199 5.8% 2.5	29,960 -6.2% -2.9	25,914 -9.4% -4.3	20,768 -11.5% -5.0	19,530 -6.0% -2.3	18,430 -5.6% -2.1	17,050 -7.5% -2.6	15,790 -7.4% -2.4
Nominal private CI (Increase rate) (Contribution rate)	25,722 9.3% 3.0	24,313 -5.2% -1.7	20,276 -2.2% -0.7	17,900 -0.3% -0.1	18,375 2.6% 0.9	18,430 0.3% 0.1	19,100 3.6% 1.3	19,350 1.3% 0.5	19,410 0.3% 0.1
Nominal private NH CI (Increase rate) (Contribution rate)	29,970 18.4% 6.4	19,505 -1.8% -0.4	15,959 0.7% 0.2	12,340 -4.9% -1.1	13,634 10.5% 2.4	14,170 3.9% 1.0	14,750 4.1% 1.1	15,450 4.7% 1.3	16,100 4.2% 1.3
Real CI (Increase rate)	85,442 7.6%	77,727 0.2%	66,195 -3.6%	54,832 -6.1%	53,283 -2.8%	52,030 -2.3%	51,170 -1.7%	50,020 -2.2%	48,820 -2.4%

(Units: billion yen. Real figures are based on 1995 prices.)

Notes:

1. CI: construction investment NH: non-housing
2. Private NH CI = private non-housing construction investment + private civil engineering investment.
3. Data from the "FY2006 Construction Investment Outlook" by MLIT up to FY2006

● Trends in construction investment (nominal contribution rate, FY)



## **1.2 UK public investment policies**

- The UK government is actively investing in transport, housing and other public works to improve social infrastructure and help make the country more internationally competitive.
- As a result, the UK Ig-GDP ratio increased from 1.3% in 1997 to 2.1% in 2005. This ratio further increases to 3.2% (2005) when the amount of total gross investment (including public-sector subsidies to private-sector railways and social housing) was compared with GDP.

### ● UK Government policies on public investment

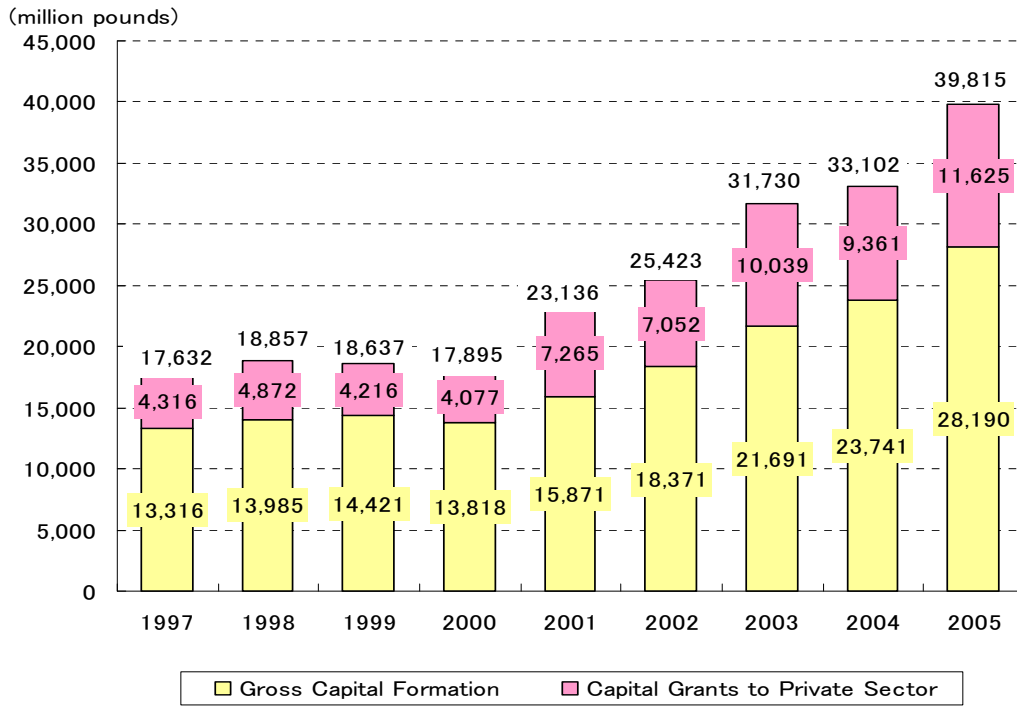
- The government adopted a policy to aggressively and continuously invest in road, rail, housing and other infrastructure to improve the country's social infrastructure and make the country more internationally competitive. The public-sector net investment was increased from 5 billion pounds (FY1997–98) to 26 pounds (FY2006–07).

### ● Investment on transport and housing

- Based on the Eddington Study, which highlighted transport's pivotal role in supporting the UK's economic success and recommended investment in deteriorating roads and rail, the Government set out a long-term strategy focused on sustained high levels of investment. "The Future of Transport" whitepaper recommends that investment in transport be increased from 10.8 billion pounds (FY2004–05) to 12.5 billion pounds (FY2007–08).
- Based on the policy recommendations of the Barker Review of Housing Supply to improve macroeconomic stability and deliver greater affordability of housing for individuals, the government formulated a five-year plan ("Sustainable Communities: Homes for All") to invest 38 billion pounds over five years into housing.

### ● The UK's Ig-GDP ratio and total gross investment/GDP ratio

- The Ig-GDP ratio in the UK increased from 1.3% in 1997 to 2.1% in 2005.
- To obtain a broader picture of public investment, by including government subsidies to railways and social housing for increased public service, the amount of total gross investment (subsidies to the private-sector included) was compared with GDP. The figure (3.2% in 2005) indicates that the UK policy has encouraged public investment.



### **1.3 Social infrastructure improvement strategies of East Asian countries**

- China, Korea, Taiwan and Singapore have been investing in the improvement of social infrastructure through national plans and social infrastructure improvement plans.
- By comparison, Japan does not seem so aware that better social infrastructure leads to improved productivity and international competitiveness. It is feared that if no measures are taken, Japan's role in East Asia will diminish.

#### ● **China**

- China formulated its 11th 5-year plan in 2006. With “the harmonized development of all regions” as its guiding principle. The plan calls for large-scale development in the western region, stronger east-west links and networks within the central region, the encouragement of high-tech industries in the eastern region, and the development of intellectual property rights, core technologies and well-known brands.
- To achieve these goals, China will promote railway development (build 17,000 kilometers of new lines, of which 7,000 kilometers will be devoted to passenger transport) and expand the road network (extend the country's total length of roads from 1.93 million kilometers to 2.3 million kilometers, and highways from 41 thousand kilometers to 65 thousand kilometers) to create an integrated nationwide transport system.

#### ● **Korea**

- Korea revised the Fourth National Development Plan in 2005 that aims to lay the groundwork to make the country a “dynamic and integrated nation” and one of the global leaders. The Plan also seeks to achieve balanced development in Korea through the decentralization of industries and the devolution of power.
- The Plan calls for a national transport network, including the development of a grid of major roads, the completion of the second-phase of both the KTX (Korea Train eXpress) and Incheon International Airport, and concentrated investment into both Busan New Port and Gwangyang Port.

#### ● **Taiwan**

- Taiwan formulated its “Economic Development Vision for 2015–Stage I: Three-year Sprint Program” in 2006. Based on the two administrative priorities of “Big Investments and Big Warm (to expand investment and to care for the disadvantaged),” Taiwan aims to increase investment into Taiwan, create job opportunities, correct the imbalance between urban and rural areas and between

the rich and poor.

- Major goals set based on the Vision include: 1) addressing water problems (“Closeness to water” by overcoming water shortages and taking flood control measures); 2) developing a “rapid and convenient transport network” (building international airports and ports, and increasing the ratio of major science parks within 10 minutes from a highway from 80% to 100%); and 3) achieving “a high quality of life” (increasing the proportion of houses that are 10 minutes’ by car from community’s art, cultural and sports centers to 95%).

### ● Singapore

- Singapore’s Concept Plan 2001 includes land use plans by purpose (residential, commercial industry, green spaces, reclaimed land, etc.). Singapore’s Master Plan (the statutory land use plan guiding Singapore’s development) has been formulated and implemented, based on the strict government control.
- To strengthen the country’s position as an international hub, air and sea ports are being upgraded. Changi International Airport’s annual passenger handling capacity will be raised, from 32.43 million in 2005 to 70 million by 2008. The Port of Singapore’s annual container cargo tonnage will be increased, from 24.79 million TEU at the end of 2005 (which ranked No.1 in the world) to 32 million TEM by 2011. The rail network will be expanded to alleviate traffic congestion and cope with population increases. The total length of MRT and LRT (138.2 kilometers as of the end of 2005) will be lengthened to 178.7 kilometers by 2010.



#### 1.4 Trends in measuring social capital stock

- When comparing standards of public investment internationally, differences among countries in the levels of improvement, in addition to the annual amount of investment, should be considered. Methods of measuring the amount of social capital stock vary from country to country, making an accurate international comparison difficult.
- For example, figures obtained by the Perpetual Inventory (PI) Method (a method to estimate the stock of fixed assets by summing up gross fixed-capital formation that has survived to the current period and deducting that which has reached the end of its service life) differs greatly depending on the service life of the infrastructure concerned.
- In addition to quantitative indices by sector (e.g., roads and water supplies) more general indices of social capital stock that integrate various sectors will serve as useful criteria for international comparison. No internationally agreed method for the calculation of the latter has been developed.
- More inexpensive and yet reliable methods to collect data and enable credible international comparisons should be developed. One promising method is the asset management system being introduced to social capital stock to calculate the amount of social capital stock.

- A survey conducted by the United Nations Economic Commission for Europe on the estimation of infrastructure service life (as of April 2003) indicates that methods used differ from country to country.

	Experts' opinion	Estimates by other countries	Depreciation based on the tax system	Administrative record	Business accounting	Survey	Other
Australia	●	●	●				
Canada						●	
France	●						
Germany	●		●	●		●	
Italy	●						
Japan			●				
UK							●

- The countries participating in the survey indicated the methods and criteria they used to estimate the service life of infrastructure. These vary from one country to another. Taking roads as an example, the service life of roads is 33 years in Australia (“general government roads”), 28 years in Canada (“roads including

related structures”), 47 years in Japan (“roads”) and 45 years in the US (“roads and streets”). The service life of sewers is 71 years in Australia (“water, sewer and drainage”), 29 years in Canada (“sewer collection and treatment facilities”), 15 years in Japan (“sewage lines”) and 60 years in the US (“sewer systems”). The methods of classifying the assets and the service lives differ greatly from country to country and cannot be rationally explained for such factors as differences in operating conditions.

- The OECD published the “OECD Manual – Measurement of Capital Stocks, Consumption of Fixed Capital and Capital Services” in 2001. Japan set up a study group on capital stock within the National Economic Accounting Research Conference in 2004, in an effort to develop internationally consistent and accurate methods of comparison. Another promising, inexpensive and yet reliable method worth studying is to use the asset management system.

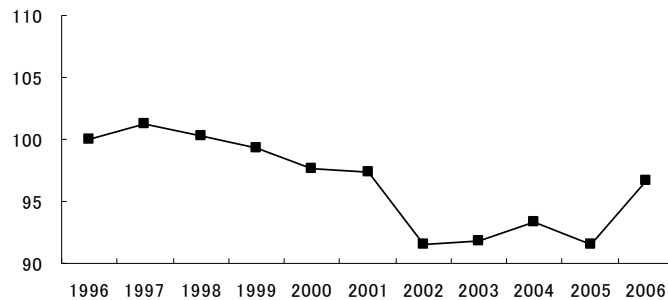
## Chapter 2 The Construction Industry

### 2.1 Analyzing the structure of the construction industry

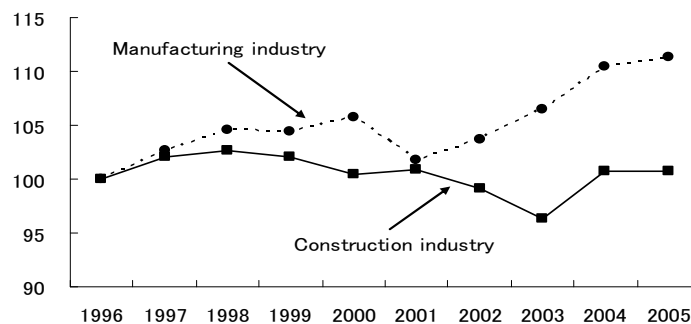
- It is said that the construction industry is suffering from oversupply. Its per-capita productivity has been declining since the mid-1990s, but its productivity per working hour has not necessarily gone down. One explanation may be that in a shrinking market, the gap between winners (successful companies) and losers (companies failing to win jobs) widens the gap both in terms of the volume of work and working hours.
- Business conditions surrounding smaller companies are worsening. Those with a capital of less than 1 million yen have recorded losses on average. The number of these micro companies however remains stagnant. This trend should be observed in the future market reorganization.
- Smaller companies with low profitability tend to overspend on personnel expenses as a component of sales or general administrative expenses. The correction of this trend is a step to better managing these companies.
- The percentage of construction businesses engaged in other businesses is increasing, and may be an effective survival strategy.

- Performance of construction companies from a financial standpoint

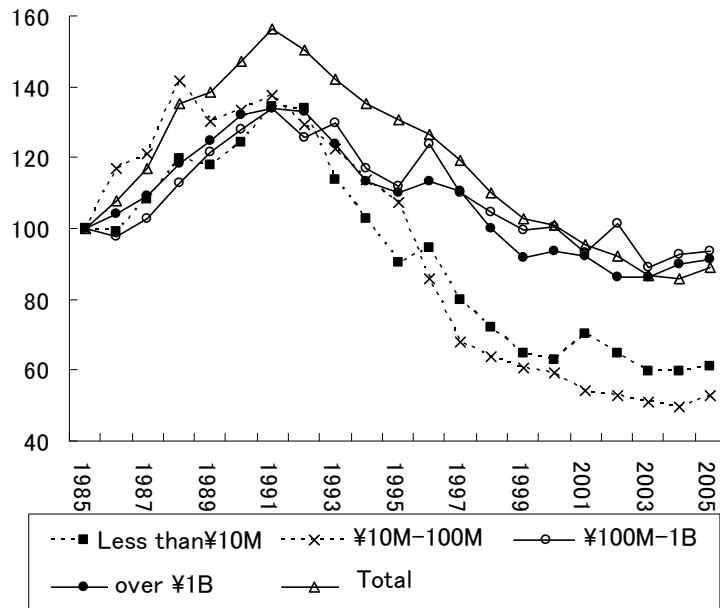
#### Per-capita wage



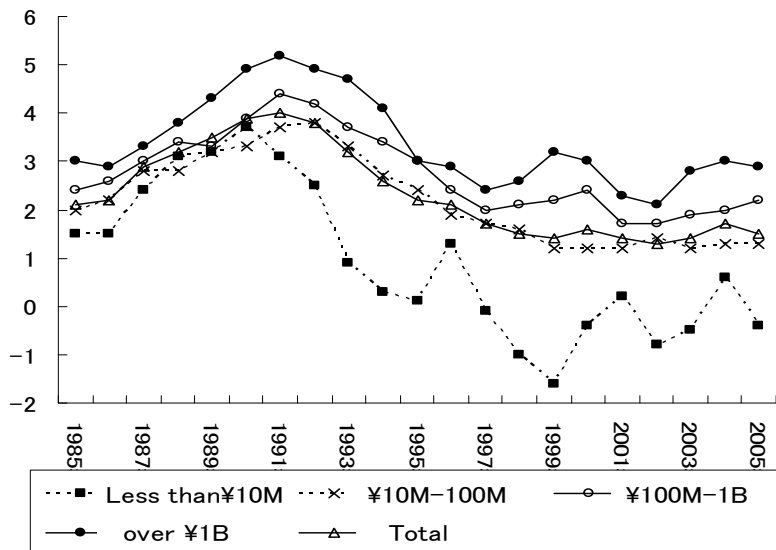
#### Productivity per working hour



**Average sales by the size of the capital**



**Sales/business profit ratio by capitalization**



● Construction companies engaged in other businesses

	1977	1982	1987	1992	1997	2002	2007
Total	13.4	14.0	17.4	19.9	20.8	22.2	24.0
Individuals	5.8	5.6	6.9	7.2	7.2	7.6	8.0
Corporations	23.2	22.9	26.3	26.7	26.1	26.9	28.5

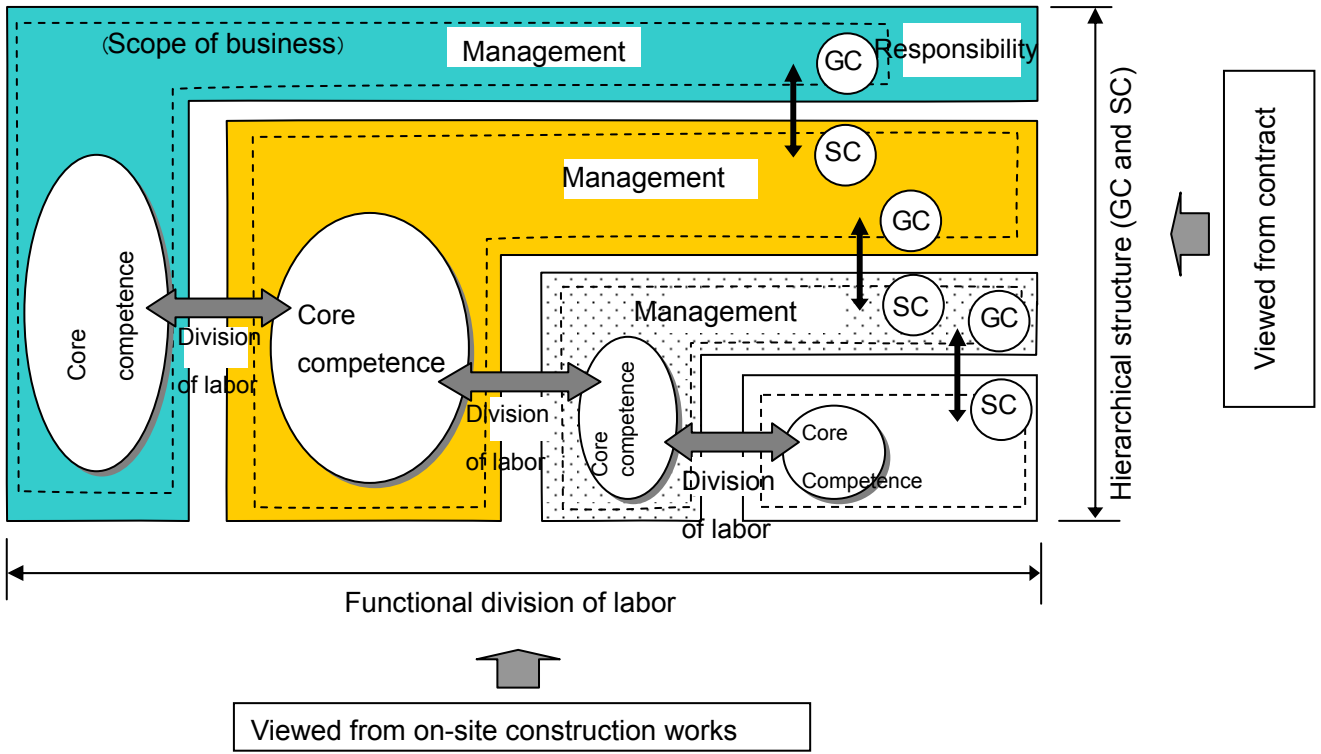
Note: Data from the survey on licensed construction companies conducted by the MLIT.

## **2.2 Structural changes in construction production and the functional division of work**

- The structure of construction production differs, depending on from which aspect it is viewed. Viewed from the perspective of contracts, it appears to be a multi-level hierarchical structure of contractor and subcontractors. Viewed from the construction site where the work is being implemented, it looks more like a team with horizontal and functional division of labor.
- It is said that there are mounting problems arising from the multi-level hierarchical structure of construction production. Perhaps the solutions to these problems may be found by changing the way of viewing construction, from a contract-based to a work-based perspective.
- For this purpose, more specific surveys on the structure of construction production should be conducted to better understand the actual conditions of role-sharing and other aspects.

- In recent years, general contractors have reduced the number of on-site engineers they employ. Construction projects are getting bigger, more complicated and specialized, and technologies are developing rapidly. For these reasons, some construction management (CM) tasks have been delegated from general contractors to first-tier subcontractors, and even to second-tier subcontractors in some sectors. Thus subcontractors with technical expertise are playing a greater role in construction projects.
- Viewed from how contracts are made, the structure of construction production looks like a multi-level hierarchical structure with a general contractor at the top and subcontractors below. The disadvantages of this structure have often been emphasized. These include the “bullying” of subcontractors by companies above them; increasing business costs associated with correspondence and coordination among various players; miscommunication and misunderstanding which may affect the product quality when a new member joins the project; the existence of inferior and unqualified companies; and the deterioration of working conditions.
- This picture changes when the structure of construction production is viewed from how the actual work is carried out on-site. General contractors, first-tier subcontractors and second-tier subcontractors gain leverage from their core competence; their relations are more horizontal than hierarchical. When their relationship is good, each company can concentrate their resources into their areas of core competence and they can increase the efficiency of their business, improve their technologies, skills, work efficiency, and make the product quality more stable.

- Therefore, we may have to shift the orientation of work-based analysis and our discussion of the structural problems listed above, to move away from a hierarchical contract-based analysis and discussion, to produce more practical and effective solutions.



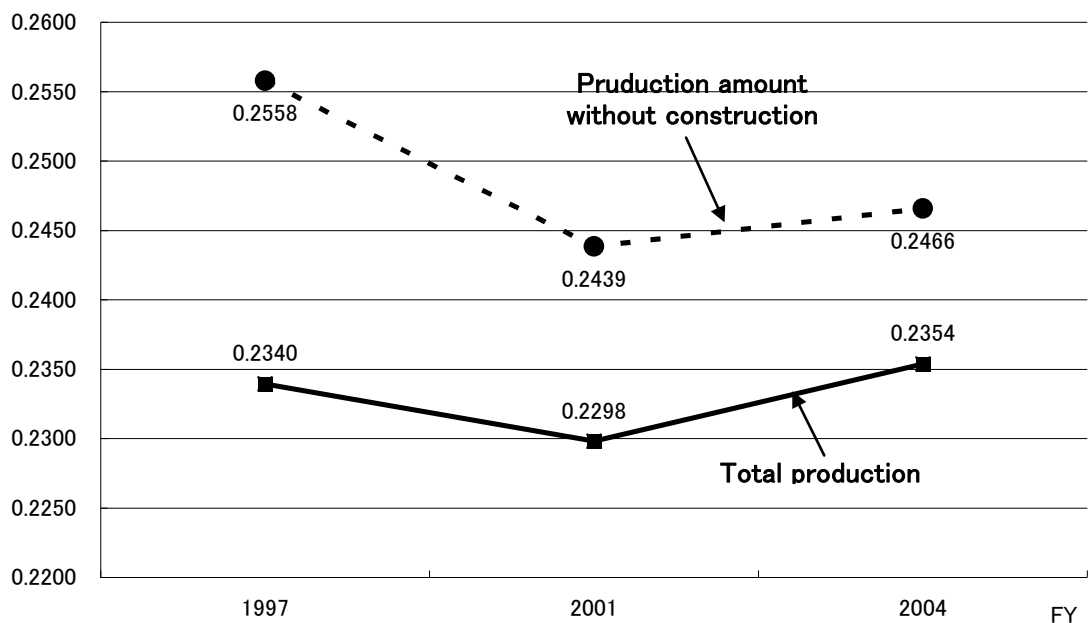
**GC= General Contractor**

**SC= Subcontractor**

### **2.3 The role of the construction industry in local economies**

- The construction industry, as seen in the number of workers and share of total production, plays an important role in local economies.
- Municipalities in 16 prefectures were selected and their Gini coefficients were calculated using total production per capita and “production-excluding-construction” per capita. The results indicate that 1) although construction production can be applied to correct imbalances between regions and, 2) its use is diminishing due to the rapid reduction in construction investment and the shift of major investors from public to private. The latter indicates that construction investment can have a direct impact on the local economy and contribute to the widening gap between regions. It is feared that local economies may become very weak before the supply-side policies, including those to help smooth the transfer of labor, take effect.
- On the other hand, construction companies can help make local economies more self-sufficient. For example, they can supply locally procured wood for housing and contribute to the circular flow of the economy through local production and consumption. Or they can contribute to local businesses by publicizing local resources (food, goods, attractions, etc.) and stimulating the local economy.
- In addition, construction companies are making social contributions, such as emergency relief work after major earthquakes and other disasters, and assisting in the removal of snow in areas that have a heavy snowfall.

- Trends in the Gini coefficients of production per capita and the per-capita “production-excluding-construction”
  - The Gini coefficient of production per capita without construction production has always been higher than the figure including construction production. Increasing the amount of construction production therefore can narrow the gaps among regions in terms of the production amount without construction production.
  - The difference between the two (“with” construction vs. “without” construction) is getting smaller. This indicates that the role the construction industry as a tool for correcting the gap among regions is weakening due to a rapid decrease in public construction investment (from 75.1906 trillion yen in FY1997 to 52.7766 trillion yen in FY2004) and a greater proportion of investment by the private sector (56.2% in FY1997 to 60.6% in FY2004).



\* Gini coefficient: a measure of the inequality of income distribution within a country, where 0 corresponds to perfect equality (everyone having exactly the same income) and 1 corresponds to perfect inequality.

\* Sixteen prefectures surveyed are those having statistical data including population by municipality and the amount of production by economic activities available online from FY1997 to FY2004 (the year when most recent statistics are available) and in a way that adjustment due to merging of municipalities can be made. They are: Yamagata, Ibaraki, Niigata, Gifu, Shizuoka, Aichi, Shiga, Hyogo, Shimane, Hiroshima, Yamaguchi, Tokushima, Ehime, Fukuoka, Saga and Miyazaki.



## **2.4 The role of construction CSR in Europe**

- The European Commission is taking the initiative in promoting Corporate Social Responsibility (CSR) among companies, public institutions and citizens. Construction trade groups have published CSR guidelines for their industry.
- A European CSR rating agency has pointed out that the construction industry lags behind other industries in terms of reporting and disclosing information on CSR.
- Social evaluation of companies is becoming an important element in many aspects including evaluating companies in public procurement and in investment in Japan.

### ● CSR in Europe

- The EU published a communication on CSR in 2006 and pointed out that CSR can play a key role in making companies more competitive while contributing to sustainable development. Since CSR is a voluntary initiative, it is considered that it should not be controlled by laws and detailed regulations.

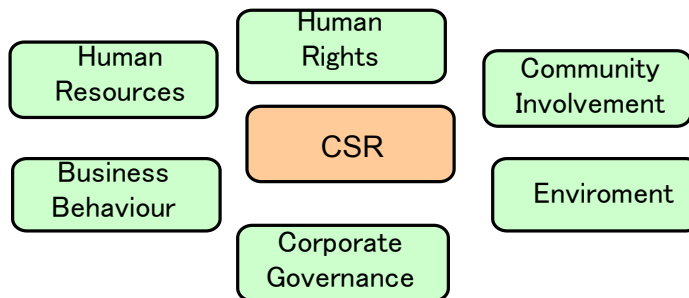
### ● Commitment to CSR by the European construction industry

- The European Construction Industry Federation (FIEC) announced the “FIEC Principles for Sustainability” in 2005. Its ten principles include the promotion of equal treatment of employees, safety procedures, responsible community relations and more environmental management strategies.

### ● Evaluation of the construction industry by CSR rating agency

- The Vigeo Group is a major European CSR rating agency. Its rating model has six fields of assessment. Each criterion is applied in relation to its sector (industry) relevance and takes into account its relative weight in terms of social responsibility.
- The Vigeo Group has pointed out that the construction sector as a whole lags behind other industries in terms of CSR reporting and information disclosure. The group has also noted that more commitment is needed in all six fields.

### The CSR fields



- How the construction industry is socially evaluated in Japan
  - The social evaluation of construction companies is made for example when they bid for public works projects, when the Socially Responsible Investment (SRI) is taken into account, and when companies are ranked by media.
  - In public works projects, social evaluation involves three processes: qualification screening, bidding and performance evaluation. It takes into account whether the company offers labor and social insurance for its workers and whether it has a disaster rescue and relief contract with the public sector.

## **2.5 New businesses for construction companies – vegetable factories**

- There are many new and promising business opportunities in the “agricultural” market for construction companies. “Vegetable factories,” for example, can help construction companies affected by seasonal fluctuation in demand, and utilize the sophisticated technical expertise of Japanese construction companies and benefit from a synergy with the core construction business.
- A construction company should establish an innovative business model totally different from that of conventional agricultural production. A company should study food supply and global environmental issues from a long perspective and find ways to capitalize on the strengths of the company.
- The “vegetable factory” is considered to be one of the most promising new fields for construction companies, partly due to long tradition of technical expertise and historical relations between agriculture and construction.

### ● Construction companies entering new fields

- Survey results indicate that many construction companies are eager to enter new business fields due to structural changes of the construction industry and society as a whole. The government is setting up and expanding public-sector financing systems to assist construction companies in this regard.
- Agriculture is considered to be one of the most promising new fields for construction companies, partly due to long historical relations between agriculture and construction. The number of construction companies entering the agricultural business arena is increasing.

### ● Construction industry and agriculture

- Japan’s agriculture is at a turning point due to the aging of its farmers, a growing interest in food safety and quality, global population increases and climate change. Agricultural reforms are creating new business opportunities.
- For example, construction companies can make the most of their expertise in civil engineering, building, equipment, the environment and information technology in the new, promising high-tech business of the “vegetable factory.”

### ● The vegetable factory as a new business

- There are yet many issues to be addressed to make the “vegetable factory” a profitable business. Its future is promising when we consider factors such as global

warming, the food supply and energy. Synergies between construction and agriculture are expected.

**Definition of the vegetable factory**

A year-around automated production system using high-tech facilities including artificial lighting and temperature control to grow plants

Soil culture → Greenhouse culture → Hydroponic culture → Vegetable factory

The fourth-stage, high-tech agriculture

## 2.6 Institutional reform of the construction industry

- The construction industry is facing tough challenges including more intense bidding competition due to rapidly declining levels of public investment and lower bidding prices. The image of the industry has been tarnished by several bid-rigging cases and a scandal involving an architect who falsified structural calculations and violated the Building Standard Law.
- To recover public confidence and to revitalize the industry, the government should reform the bidding and contracting systems, force the construction industry to comply with laws and regulations, and increase the technical capability of companies to make them competitive in comprehensive evaluation.
- Plans for the structural reform of the industry are indicated in “The Policy of Construction Industry in 2007.” The reform process should be accelerated through the united efforts of government and the construction industry to regain lost public confidence and improve its image.

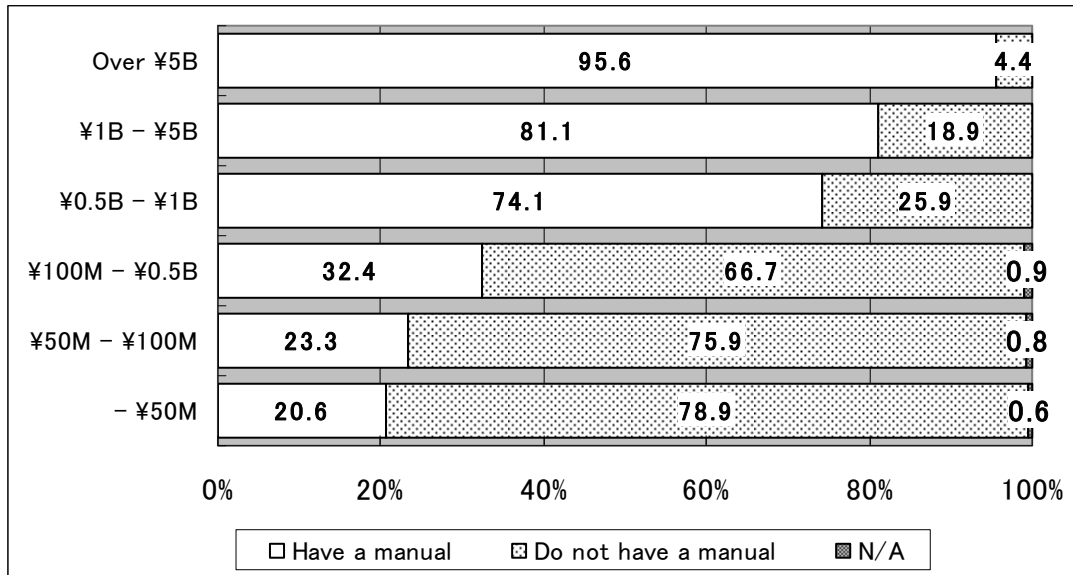
### ● Structural reform plans

Content of the reform	Background
(1) Revise the Antimonopoly Law	<ul style="list-style-type: none"> <li>• Stop bid-rigging and discourage construction companies from thinking too much alike (“group-think”)</li> <li>• More competitive policies</li> </ul>
(2) Revise the Architect Law	<ul style="list-style-type: none"> <li>• A scandal involving an architect who falsified structural calculations</li> <li>• Stricter building confirmation and inspection systems</li> </ul>
(3) Reform bidding & contracting systems	<ul style="list-style-type: none"> <li>• Concerns over tougher competition, under-priced bidding, and lower quality</li> <li>• The Quality Assurance Law and the comprehensive evaluation bidding method</li> </ul>
(4) Review the management items screening system	<ul style="list-style-type: none"> <li>• Significant decline in completed construction work due to a decrease in construction investment</li> <li>• Fair evaluation of construction company activities that make a social contribution</li> </ul>

- **Compilation of compliance manuals**

- There is a gap between large companies and smaller companies in terms of compiling and enforcing compliance manuals.

(By capitalization)



Data from the Japan Fair Trade Commission

**3.1 The need for objective assessment criteria of cities**

- Demands for greater government accountability and the need to build consensus among various players of city planning are driving the need to objectively compare and evaluate cities using a wide range of data sources, including information on demographics, the economy, and the environment.
- Levels of satisfaction with daily life can be measured in terms of: 1) basic living conditions; 2) social factors (e.g., the number of crime incidents and the percentage of students going to college); 3) service (e.g., the number of retail stores, level of rents); 4) vitality (e.g., number of offices, total production); and 5) the environment (the amount of garbage generated). When comparing cities, the statistical data concerning transportation, telecommunication, environment and culture may differ from municipality to municipality. Methods to enable objective assessments by compiling and processing available data should be established.
- The European Union has a tool of comparison called “Urban Audit” to facilitate the exchange of experience and improve the quality of local urban policies. Japan should refer to this tool, improve data by united efforts of urban policy makers, and use the outcome (comparisons) for better city planning.

**● Urban Audit**

The Urban Audit collects information on the living conditions found in 258 large and medium-sized cities within the European Union and the candidate countries (EU27) to facilitate the exchange of experience and improve the quality of local urban policies. It contains data for over 250 indicators across the following nine domains. Data can be accessed online through the applications of “City Profile,” “How do the cities rank?” “How does your city compare?” and “What is the structure of your city?” (<http://www.urbanaudit.org/>)

	Domains	Major indicators
1	Demography	Population (by age and sex), nationality, no. of households
2	Social Aspects	Housing (no. and price), average life expectancy, infant mortality rate, medical service coverage, crime
3	Economic Aspects	Employment, regional gross production, no. of offices, no. of employees, no. of bankruptcies, income levels
4	Civic Involvement	No. of voters, city's financial condition (revenue, expenditure and municipal tax income)
5	Training and Education	No. of students enrolled in compulsory and secondary educational institutions, percentage of students going to college, no. of students refusing to attend school
6	Environment	Climate, air quality and noise level, water and sewer, solid waste disposal and recycling, green area, land use, energy consumption (e.g., electricity and gasoline)
7	Travel and Transportation	Commuting time, no. of traffic accidents, public transportation, access to airports and ports
8	Information Society	No. of Internet users, websites of local governments, trends of IT company location
9	Culture and Recreation	Public libraries, theaters, movie theaters, no. of concerts held, no. of tourists

### **3.2 Construction industry and the Business Continuity Plan (BCP)**

- The Central Disaster Management Council of the Cabinet Office announced the Business Continuity Guideline in August 2005 urging private businesses to establish their own BCPs.
- Large general contractors were quick to take action and form their own plans, but smaller companies, particularly those in local regions, have lagged behind.
- In an earthquake-prone country like Japan, an earthquake response plan in anticipation of building collapses is an important component of the BCP. The BCP offers a good business opportunity for construction companies; they have accumulated extensive information of buildings and can help companies in other industries develop their own BCPs.



- What is a BCP?
  - A BCP is a plan to ensure the maintenance or recovery of operations during and after a disaster or an accident.
  - In addition to traditional disaster preparedness plans, it encompasses continuity, the early recovery of critical operations, and the maintenance and recovery of supply chains.
  
- Construction industry and BCPs
  - The construction industry plays a crucial role in the recovery process, rebuilding shattered infrastructure and enabling companies to continue their businesses.
  - When a construction company (part of a multi-layered and contract-based extensive network of companies from large to small) forms a BCP, the plan should be viewed from the perspective of supply chain and the overall network.
  
- A survey on 54 member companies of the JFCC
  - RICE conducted a BCP questionnaire survey on 54 JFCC (Japan Federation of Construction Contractors) member companies. The findings show that the number of companies formulating a BCP has increased significantly in the past twelve months. Those companies that have formed a BCP have plans to operate it and revise it if necessary, and coordinate their efforts with related companies.
  
- Local medium-sized and smaller construction companies and BCPs
  - Surveys of smaller companies have shown that in general, they are not prepared to develop or implement BCPs.
  - However in rural areas where major contractors do not have businesses, these smaller companies are the major players supporting the local economy, and they are expected to sustain their businesses after a disaster.
  
- BCPs offer a new business opportunity for construction companies
  - Assuming that earthquakes are one of the major risk factors to be considered in BCP preparation, it will be crucial that the planners of BCPs have detailed information on buildings and facilities, including their degree of earthquake resistance and functionality. Construction companies can therefore utilize their databases and knowledge to exploit business opportunities in helping companies in other sectors develop their BCPs.

## Chapter 4 Overseas Construction Markets

### 4.1 Trends in overseas construction markets

- Despite a decline in the number of houses being built, the US economy is fairly steady, supported by strong private consumption and business investment. However, it is feared that the recent sub-prime lending crisis may dampen private consumption. The expected level of construction investment in 2007 is 1.1754 trillion dollars, 2.4% below the previous year. Investment in private housing was down 16.4% from the previous year, whereas private non-housing and public works both recorded an increase.
- European economies are gradually recovering. The German economy, which had been recording very low growth compared to the UK, France, Italy and Spain, seems to have returned to the path of growth in 2006 backed by higher levels of construction investment.
- Many countries in Asia and Oceania continue to enjoy high GDP growth rates and increases in construction investment. Though the figures are especially high for China, the nation frequently revises its statistics, giving rise to concerns over the credibility of the figures. The 2006 per-capita amount of construction investment of Australia surpassed that of Japan.

### 4.2 EU Public Procurement Directive

- The EU Public Procurement Directive sets out the legal framework which the laws of each EU member country must follow.
- The European Parliament adopted the EU public procurement directive (Directive 2004/18/EC) on February 3, 2004 (Directive 2004/18/EC). This is a single directive for the public sector, abolishing and consolidating the four directives of the Supply Directive (93/36/EEC), the Works Directive (93/37/EEC), the Services Directive (92/50/EEC), and the Directive (97/52/EC) which later amended the first three under the WTO. Directive 2004/18/EC, effective as of August 2007, has the following features:
  - A framework agreement: an agreement between one or more contracting authorities and one or more economic operators chosen by bidding, the purpose of which is to establish the terms governing contracts to be awarded during a given period (four years), in particular with regard to price and, where appropriate, the quantity envisaged.
  - A central procurement body: A body responsible for awarding public contracts or framework agreements of goods, services and works for other contracting authorities.
  - Competitive dialogue procedures: This is the new fourth procedures in addition to 1) open procedures, 2) restricted procedures and 3) negotiated procedures.
  - Award criteria: besides "the lowest price," "the most economically advantageous tender" criteria was added.
  - An electronic process ("dynamic purchasing system") and environmental considerations are specified in the Directive.