

Construction Economy Report

No. 41

The Japanese Economy and Public Investment

**The Future Construction Market and the
Creation of a New Construction Industry**

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(RICE)

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CONTENTS

Chapter 1	Macroeconomics and Construction Investment	1
		[Original Japanese Version: p.1 40]
1.1	Trends in the Japanese Economy and Construction Investment	
1.2	The Regional Economy and Construction Investment	
1.3	PFI Performance and Future Prospects	
Chapter 2	Trends in the Construction Bidding and Contracting Systems	5
		[p.41 70]
2.1	Trends in Contracting Systems for Private Construction Projects	
2.2	Trends in the Bidding and Contracting Systems of Local Governments	
Chapter 3	Trends in the Construction Industry	9
		[p.71 117]
3.1	Prospects for Construction Industry Restructuring and Renewal	
3.1.1	The Restructuring and Renewal of the Construction Industry	
3.1.2	The Restructuring and Renewal of Leading General Contractors	
3.2	E-business in the Construction Industry	
3.3	The Changing Roles of Specialized Contractors and More Efficient Construction Production	
Chapter 4	City and Housing	17
		[p.119 140]
4.1	Housing in a Graying Society	
4.2	Community Renewal	
Chapter 5	Overseas Trends	21
		[p.141 186]
5.1	Trends in Overseas Construction Markets	
5.2	Outline of the U.S. Construction Industry	
5.3	The Department of Homeland Security	

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1.1 Trends in the Japanese Economy and Construction Investment

- ◆ The Research Institute of Construction and Economy (RICE) expects overall construction investment in FY2003 to fall by 4.7% in nominal terms over FY2002, to 53.8818 trillion yen. Decreases of 8.8%, 1.8% and 0.9% are expected, respectively, for government construction investment, private housing investment and private non-housing construction investment. FY2004 nominal construction investment is expected to fall again by 3.4%, to 52.708 trillion yen.
- ◆ Public investment can stimulate the economy. The multiplier effect of public investment is far greater than that of tax cuts, and is still considered to be an effective, quick-acting measure to stimulate the economy.
- ◆ For a full-scale economic recovery, the government should create demand through:
 - a) focused investment into urban renewal and other projects that can stimulate national and regional economies; and
 - b) implementation of investment-effective projects utilizing private funds such as PFI (Private Finance Initiatives).

Trends in construction investment (FY)

FY	Actual						Forecast	
	1990	1995	1999	2000	2001	2002	2003	2004
Nominal CI	81,440	79,017	68,504	66,142	60,830	56,520	53,882	52,078
(Increase rate)	11.4%	0.3%	-4.1%	-3.4%	-8.0%	-7.1%	-4.7%	-3.4%
Nominal government CI	25,748	35,199	31,938	29,963	27,790	24,950	22,753	21,336
(Increase rate)	6.0%	5.8%	-6.0%	-6.2%	-7.3%	-10.2%	-8.8%	-6.2%
(Contribution rate)	2.0	2.5	-2.9	-2.9	-3.3	-4.7	-3.9	-2.6
Nominal private CI	25,722	24,313	20,724	20,276	18,580	17,930	17,607	17,476
(Increase rate)	9.3%	-5.2%	4.9%	-2.2%	-8.4%	-3.5%	-1.8%	-0.7%
(Contribution rate)	3.0	-1.7	1.3	-0.7	-2.6	-1.1	-0.6	-0.2
Nominal private NH CI	29,970	19,505	15,842	15,903	14,470	13,640	13,521	13,261
(Increase rate)	18.4%	-1.8%	-10.4%	0.4%	-9.0%	-5.7%	-0.9%	-1.9%
(Contribution rate)	6.3	-0.4	-2.6	0.1	-2.2	-1.4	-0.2	-0.5
Real CI	85,442	79,020	69,874	67,314	62,540	58,500	56,160	54,659
(Increase rate)	7.7%	0.2%	-3.1%	-3.7%	-7.1%	-6.5%	-4.0%	-2.7%

(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.

1.2 The Regional Economy and Construction Investment

- ◆ The FY2003 estimate of nominal construction investment by region suggests that provincial regions are suffering a drastic decline in construction investment, that is more rapid than the national average. This may have a serious impact on the regional economy and employment.
- ◆ The decline in the amount of construction production has a greater effect on the regional economy in provincial regions than in metropolitan regions. It seems that the oversupply of construction workers in terms of production volume per worker is felt more strongly in the provincial regions.
- ◆ Given this situation, the public investment budget should be allocated with due consideration to current regional trends in both the economy and employment, and should focus on worthwhile projects taking regional needs into account.

Year-to-year change of nominal construction investment by region until FY 2003 is as follows:

Year-to-year change of nominal construction investment by region until FY 2003

(unit:%)

	Hokkaido	Tohoku	Kanto	Hokuriku	Chubu	Kinki	Chugoku	Shikoku	Kyushu	Okinawa	Nation
2001	1.3	-9.9	-5.0	-8.5	-8.4	-13.3	-5.7	-15.2	-11.6	-6.2	-8.0
2002	-12.2	-9.7	-4.6	-8.5	-6.2	-8.3	-8.3	-9.0	-7.9	-0.5	-7.1
2003	-8.6	-6.5	-3.8	-7.1	-2.9	-3.6	-5.0	-5.1	-5.7	-4.2	-4.7

When comparing the three-year increase of construction production from FY2000 to FY2003 ("A" in the table below) and the FY2000 regional GDP ("B" in the table below), the negative effect of construction production decline on the regional economy is greater in the provincial regions than in the metropolitan regions. The negative impact may be even greater when considering the ripple effect of construction investment.

Ratio of FY2000 regional GNP(B) to FY2000-2003 average increase of construction production (A)

	Hokkaido	Tohoku	Kanto	Hokuriku	Chubu	Kinki	Chugoku	Shikoku	Kyushu	Okinawa	Nation
A/B	-2.4%	-2.3%	-0.9%	-1.9%	-1.2%	-1.5%	-1.3%	-2.3%	-1.9%	-1.2%	-1.4%

Note: Amount of construction production is the regional total (total of all prefectures in the region) of the construction industry's value-added amount (operating income + personnel expenses + depreciation cost).

Construction production per capita decreased in all regions from FY1995 to FY2003 (estimated figures). The oversupply of construction workers is more apparent than ever before.

Trends in construction production per capita

(¥M/person)

	Hokkaido	Tohoku	Kanto	Hokuriku	Chubu	Kinki	Chugoku	Shikoku	Kyushu	Nation
1995	8.0	6.1	6.7	6.3	6.8	7.1	5.6	6.0	5.2	6.5
2003	6.4	4.3	5.6	4.5	5.2	4.4	4.3	4.3	4.0	4.9
'03/'95	0.80	0.70	0.84	0.71	0.77	0.61	0.76	0.73	0.77	0.75

Note: Numbers of FY2003 construction workers used for calculation are those of FY2002.

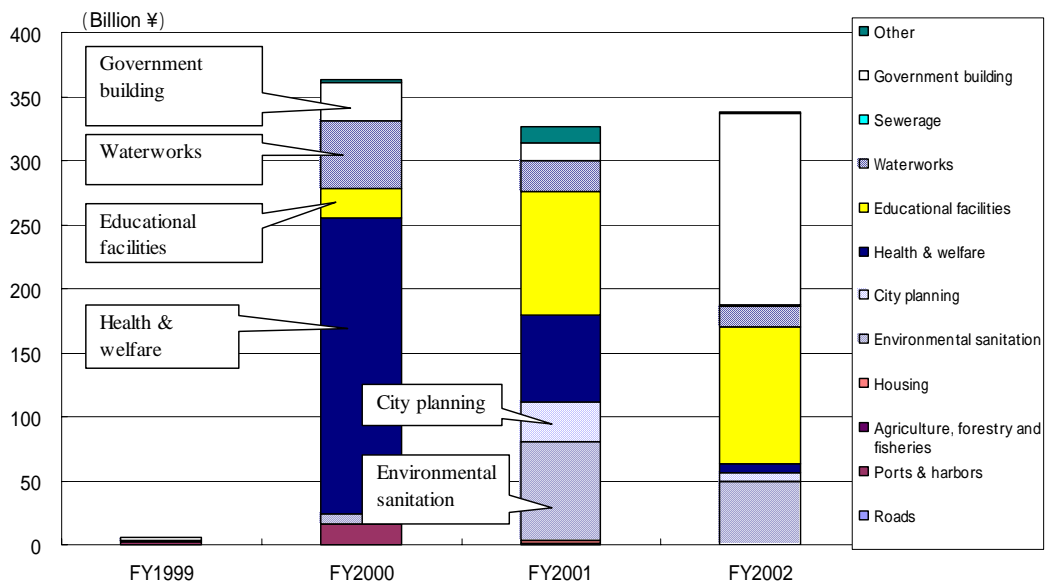
1.3 PFI Performance and Future Prospects

- ◆ PFI contracts in Japan are commonly used in agreements to construct buildings and facilities in the fields of education, environmental and hygiene, health and welfare facilities, and to repair government facilities.
- ◆ The PFI market is expected to increase to 5.2% of total public investment (in terms of initial investment amount) or to 1.8 trillion yen annually.
- ◆ Factors that may affect this forecast are: a) the use of PFI in road construction and other major national land conservation projects taking a large share in public investment; b) entry of many industries and companies into more diversified PFI project types; and c) better coordination between officers and sections in charge of PFI and those in charge of facilities management/improvement.

Trends in total PFI project costs by type of facility

(Classified by the time period when the PFI implementation plans were announced)

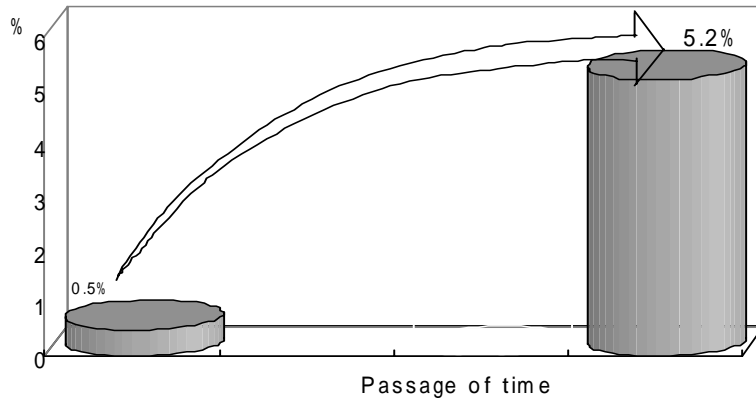
The decision was made to utilize PFI for 1 trillion yen-worth of projects by FY2002.



Note: Project expense estimates by RICE. Projects are classified according to the year their implementation plans were formulated.

Forecast of PFI market size (based on the initial amount of investment)

The PFI market is expected to initially expand rapidly, but will eventually slow down due to factors including: a) the difficulty in selecting projects suited for PFI, and b) variation in the ability of both clients and contractors in utilizing PFI.



2.1 Trends in Contracting Systems for Private Construction Projects

- ◆ A survey of large private companies (145 companies replied) with a total annual capital investment amount of 5 billion yen and over revealed two points.
 - a) The companies combine various contracting methods (e.g., design-build, build-all and build-separate) depending on the purpose, content and conditions of the project. Most have shown a strong interest in construction management (CM), but only a few have actually used it.
 - b) Successful bidding contractors are chosen not only by the price they bid, but also by other factors. If the contractor is appointed without bidding, past business experience with the contractor is a major selection factor.
- ◆ The public sector should learn from the contracting practices of private companies. Though they are not readily applicable to public works projects due to various restraints, the advantages and initiatives of private practices should be used.

Trends in project contracting

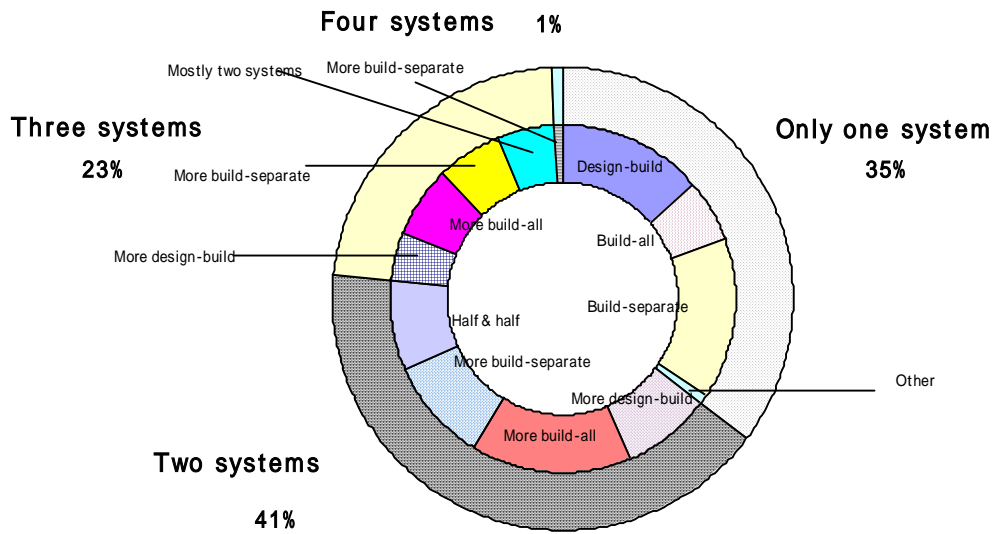
- Many companies have scaled back their construction investment in the past few years. Many of them expect a further overall decline in investment, but are planning to increase their expenditure in areas other than new construction (e.g., structural maintenance, repair and renovation.)
- Over half the respondents to the questionnaire survey replied that they do not give priority to affiliated construction companies when placing orders. The business environment surrounding affiliated companies and group companies is becoming harsher.
- When choosing a contractor in renewal projects, the company that originally constructed the facility is not necessarily chosen. Nearly 40% replied that they would not readily give them work to the original constructor, but would conduct screening and bidding again.

The four major contracting systems in use are:

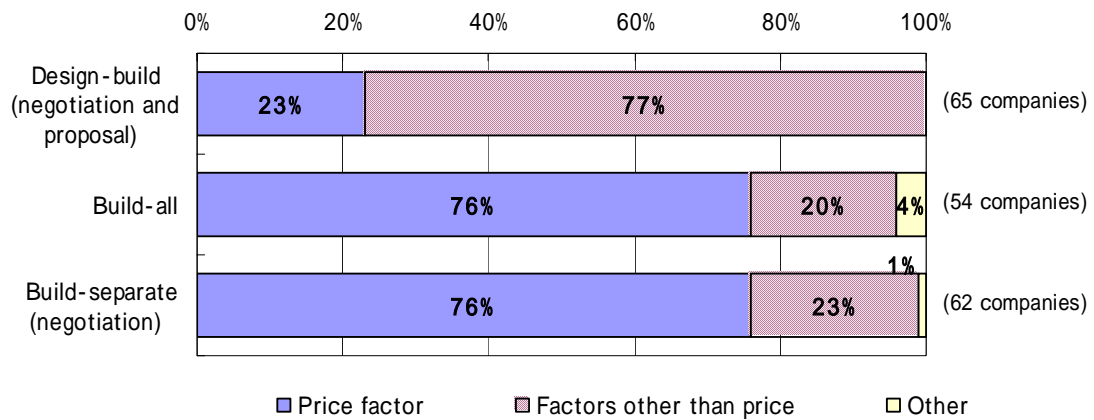
- a) Build-all (contracting all construction work)
- b) Design-build (contracting both design and construction)
- c) Build-separate (separate contracting according to the type of construction)
- d) Construction Management (CM)

Patterns of contracting systems in use

(Answer received from 133 companies)



Factors emphasized in choosing the contractors



2.2 Trends in the Bidding and Contracting Systems of Local Governments

(1) A better method for screening companies participating in bidding

To ensure the quality of public works projects, bidders should be screened in terms of their, technical expertise and social commitments as well as their financial capacity when the bidding participants are selected (pre-evaluation and entry to each bid).

i) When pre-evaluating the companies, how carefully and by what means the "subjective matters" (technical expertise and social commitments) are evaluated depends on the order-placer. Regional core cities and other smaller cities tend to rely on more objective criteria of financial ability.

ii) Nearly 30% of local governments still do not require bidders to indicate their past work experience in general competitive bidding.

iii) It is desirable to use a third party in pre-evaluating companies, to ensure objective evaluation and to reduce the procuring body's workload. In the bidding phase, participants should be more thoroughly screened in terms of finance, technology and social commitment.

(2) New bidding and contracting system utilizing company proposals the competitive negotiation method & design-build contract

A system allowing negotiations between the procuring body and bidders is desirable (competitive negotiation method) for large-scale, highly complex and difficult projects, where there are multiple design and specification options. This method should be combined with a design-build contract, allowing flexibility in design and build process. Some considerations needed for introduction of this system are: a) how to support procurement officers both quantitatively and qualitatively, to cope with work load increase; b) the elimination of arbitrary decisions by the procuring body; c) remuneration for proposals made by the bidders and confidentiality; and d) a review of accounting laws.

The major results of the survey are as follows:

1. By FY2002 over 60% of local governments were using subjective matters (technical expertise, social commitments, etc.) in pre-evaluation. (This percentage is over 90% for prefectures and major cities, over 60% for special wards, about 50% for regional core cities and less than 50% for other cities.)

2. Nearly 30% of local governments do not require construction performance for participation in general competitive bidding. (This ratio varies among local governments.)

3. Construction companies are pre-evaluated by third parties in other industrialized countries:

US	Financial ability by surety company
UK	Financial and technical abilities and social commitments by Constructionline
France	Technical ability and social commitment by QUALIBAT (building) and FNTP (civil work)
Italy	Financial and technical ability by SOA

4. The competitive negotiation method is already in use in the US. A “competitive dialogue” method is included in the proposed revision of the EU Directives on Public Procurement being discussed (France is scheduled to introduce the method this autumn, ahead of other countries). A similar provision is included in the WHO Government Procurement Agreement.

3.1.1 The Restructuring and Renewal of the Construction Industry

- ◆ The construction market is shrinking. Assuming that the value-added amount of the construction industry as a whole decreases by 15-20% from 2001 to 2001 and per capita value-added volume either a) levels off or b) decreases by 7-10% (or about half the decline rate of the industry as a whole), the number of construction workers (6.32 million in 2001) will decrease by between 0.47 and 1.26 million, to fall to between 5.06 and 5.85 million people.
- ◆ The number of construction companies in business (290 thousand in FY2001) is expected to decrease, along with a gradual decline in the number of construction workers per company (14.3 workers in FY2001). The decline rate of the former is expected to be a little less than that of the latter.

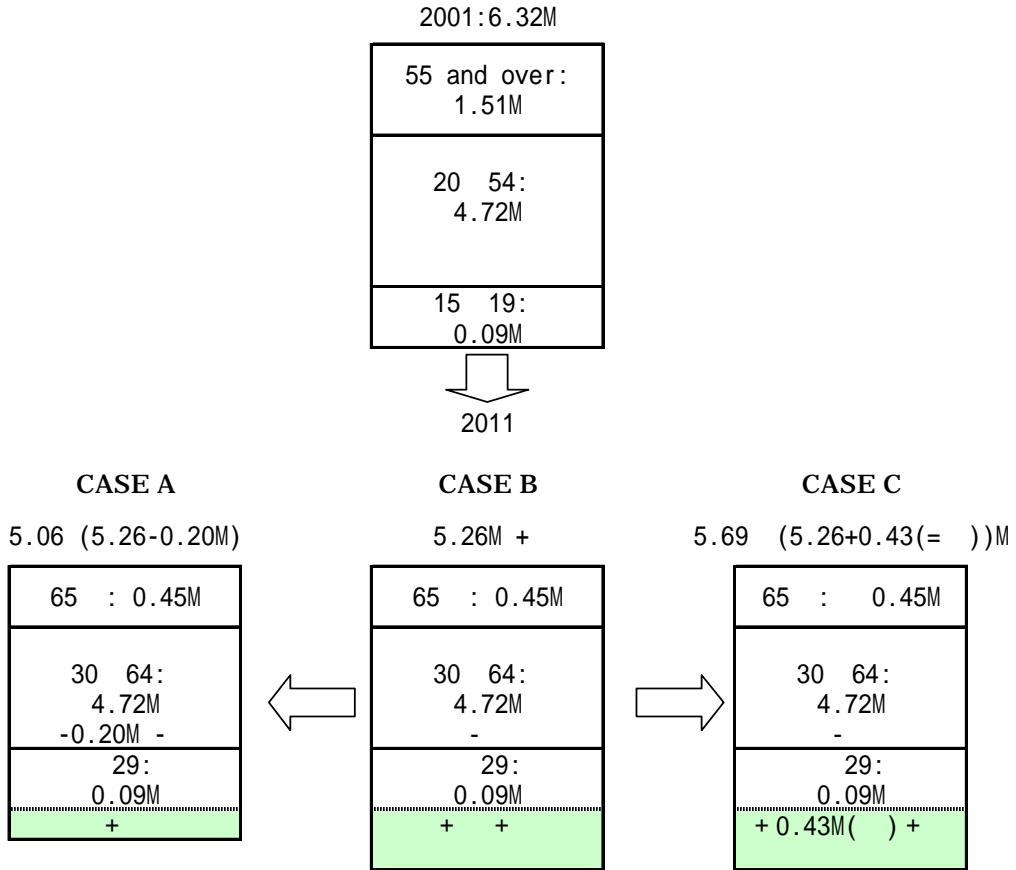
Estimates of construction workers in 2011

Value -added amount	Per capita value-added amount		
	CASE A*	CASE B**	CASE C***
-15%	5.37million (-15.0%)	5.61 million (-11.3%)	5.85 million (-7.5%)
-20%	5.06 million (-20.0%)	5.37 million (-15.0%)	5.69 million (-10.0%)

- * CASE A: Level off, or remain stationary
- ** CASE B: Decrease rate is 1/4 of that of the value-added amount
- *** CASE C: Decrease rate is 1/2 of that of the value-added amount

**Estimated number of construction workers in 2001
when the value-added amount decreases by 20%**

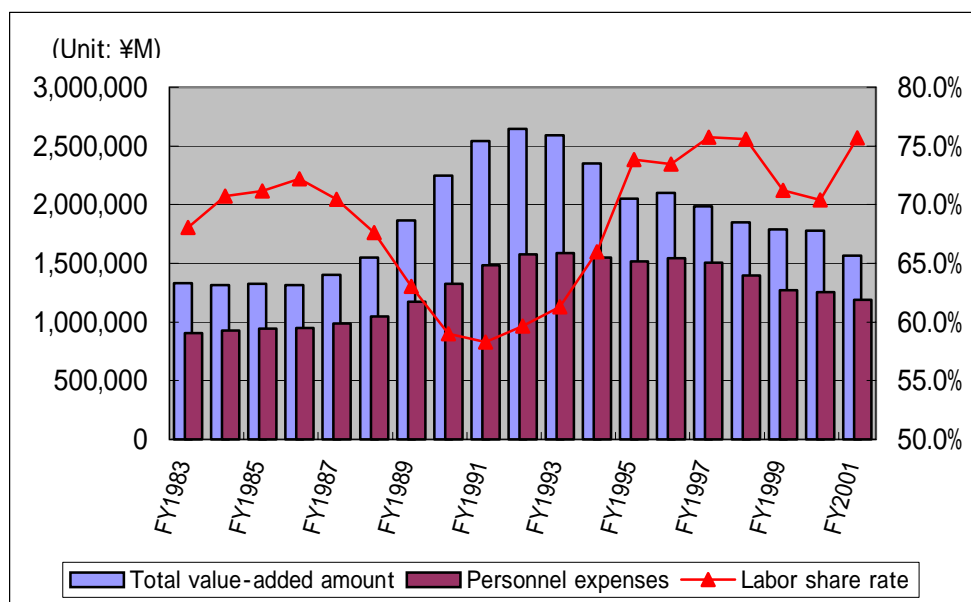
(M = million)



3.1.2 The Restructuring and Renewal of Leading General Contractors

- ◆ The leading general contractors (44 companies) have suffered from a decline in both the total contracted amount and unit price of contracts since 1991. The shrinking amount of value that can be added, especially shrinking profit, boosts the labor cost component, which makes most companies ask themselves whether they have more employees than they can afford.
- ◆ Many companies think that the number of employees will naturally decrease due to retirement and other reasons, and do not need to lay off employees. If the value-added amount decreases by 15-20% over the next five years however, they may have to cut their personnel levels.
- ◆ While many companies appear to be continuing to focus on their core businesses, some are thinking about gradually increasing the percentage of non-construction business. (Four companies expect it to reach 20% of the total, four companies aim at 30%, and one company aims at increase the percentage of non-construction business to as much as 40%).

Trends in total value-added amount, personnel expenses and labor share rate of 44 large general contractors



Notes:

1. Compiled from: a) brief announcement of the most recent financial results following the end of the fiscal year, and b) financial statements, of 44 large general contractors.
2. Total value-added amount = personnel expenses + current profits + rent + taxes and dues + depreciation cost + financial charges

Natural decline of workers vs. required number of job cuts

	Total No of employees (as of FY2001)	Natural decline of workers		Required number of job cuts					
				Total value-added amount: -15%			Total value-added amount: -20%		
		in 5 yrs	in 10 yrs	Per capita personnel expenses: level off	Per capita personnel expenses: -5%	Per capita personnel expenses: -10%	Per capita personnel expenses: level off	Per capita personnel expenses: -5%	Per capita personnel expenses: -10%
Major GC	49,445	5,915	13,434	5,315	2,701	334	7,911	5,167	2,670
Semi-major GCA	22,152	1,822	4,946	2,381	1,210	150	3,544	2,315	1,196
Semi-major GCB	19,791	292	3,051	2,128	1,081	134	3,167	2,068	1,069
Medium-sized GCA	26,277	815	3,509	2,825	1,435	177	4,204	2,746	1,419
Medium-sized GCB	9,349	164	432	1,005	511	63	1,496	977	505
Total	127,014	8,680	25,372	13,654	6,938	858	20,322	13,273	6,859

Notes:

1. Numbers of employees by age groups of each company group are estimated by multiplying the numbers of total employees by the ratios of employees of respective age groups which are based on the result of a questionnaire survey conducted by RICE.
2. The simulation is based on the assumption that the same number of new employees employed by each group in April 2003 will be employed every year.
3. Shaded figures indicate that layoffs and other personnel cut will be necessary in five years. Figures with * indicate that personnel cuts will be necessary 10 years from now.

3.2 E-business in the Construction Industry

- ◆ Information technology (IT) in Japan's construction industry is moving from the introductory stage to the utilization stage. E-business, utilizing IT to achieve greater rationalization and more efficient construction production, is gaining importance.
- ◆ Inter-company cooperation is essential for successful e-business. The establishment of an integrated construction portal (e-marketplace) may encourage such cooperation.
- ◆ Small and medium-sized companies (SMEs) should be involved in the development of construction e-business. Ease-of-use and simplicity are important factors in enabling these companies to enter e-business.

Development and diffusion of IT and e-business in the construction industry

- More companies, SMEs (small and medium-sized enterprises) in particular (though still lagging behind large companies), connected to the Internet this year, and are building in-house information systems. The ratio of companies where most employees have access to the Internet has increased, from 61.1% to 70.0% for large companies, and from 23.7% to 35.5% for SMEs. The proportion of companies having in-house information systems (server + PCs) increased from 81.7% to 87.8% for large companies, and 42.9% to 54.4% for SMEs.
- In the field of administrative tasks (both head and branch offices), information technology is applied in financial management (77.3% in large companies) and cost management (75.7% in large companies).
- E-business, a combination of e-commerce (online transactions) and in-house business operations and processes, is attracting attention

Cooperation and coordination beyond the "corporate boundary" through integrated construction portals

(Problems associated with the introduction of e-commerce)

- While CALS/EC (Continuous Acquisition and Life-cycle Support and Electronic Commerce) is spreading through Japanese construction companies, Business to Business (B2B) e-commerce is lagging behind.
- Obstacles to the diffusion include: a) concerns over security; b) customers are slow to adopt IT and the market is too small to justify large-scale investments in IT and; c) work duplication due to delays in business integration.

(Need to go beyond the "corporate boundary")

Obstacles affecting the integration and coordination of business processes are: a) the "legacy" forms of transactions; b) the fragmented construction industry and; c) the need to achieve neutral and transparent practices. An integrated construction portal combining the functions of e-commerce, project management and construction-related content would be one solution to overcome these obstacles.

The development of e-business involving SMEs

- For SMEs it is relatively inexpensive to introduce project management functions and their merits can be enjoyed from the early stage of introduction. This advantage is expected to contribute greatly to the development of e-business.
- Integrated construction portals are particularly useful for SMEs at a disadvantage both in terms of capital and human resources. “Ease of use” is also an important factor to encourage the diffusion of e-business among SMEs.
- CALS/EC should be the springboard for the introduction of e-business.

3.3 The Changing Roles of Specialized Contractors and More Efficient Construction Production

- ◆ Outsourcing by contractors is increasing. Specialized contractors are required to have construction management expertise in addition to their existing construction/engineering ability. The role of the specialized contractor is changing.
- ◆ Trade associations of specialized contractors are taking such measures as: conducting research and development; joint contracting to level work; and increasing their risk-bearing ability.
- ◆ On-site production systems need to be restructured along with the changing roles of specialized contractors. Present systems are causing confusion in the roles and responsibilities of the participating companies, and are lowering work efficiency.

Tasks by specialized contractors are more specialized and sophisticated

- Outsourcing by contractors is increasing. The role of specialized contractors is increasing in construction.
- The roles of specialized contractors and their foremen are changing, and are likely to continue to change, with greater emphasis on construction management in addition to actual construction work.
- The relationship between contractors and subcontractors is changing. Subcontractors are less willing to be tied by an exclusive relationship to a single contractor. Subcontractors should increase their competitiveness in terms of sales and marketing. They should also train personnel and increase productivity to become competent specialized contractors.

Measures taken by the government and trade associations

- Trade associations of specialized contractors are implementing measures for their member companies, based on the “Innovation strategy for Specialized Works” announced by the Ministry of Land, Infrastructure and Transport (July 2000).
 - Case study: Zenatsuren (National Federation of Gas Pressure Welding Cooperatives)
 - (R&D) Joint R&D with universities and private companies to differentiate from other lines of business
 - (Leveling of work) Joint contracting by small companies of large-scale projects to level work
 - (Risk-bearing ability) Introduction of an insurance system so that members can be responsible for contracted work
- The Fund for Construction Industry Promotion offers “step-up indices” for main contractors and procuring bodies so that they can evaluate and screen specialized contractors.

Coping with changing roles

- Specialized contractors should increase their construction/cost management and managerial abilities to better cope with their changing roles.
- The relationship between contractors and subcontractors at construction sites are changing from one-way to interactive. Unofficial or day-to-day coordination among specialized contractors is gaining importance, but this type of coordination often results in unclear sharing of roles and responsibilities.
- The function of such unofficial coordination should be clarified, and contracts with subcontractors should be in writing. The main contractor should enhance its ability as overall coordinator of different types of works and specialized contractors, to optimize the project's resources and to maximize productivity.
- Contractors and subcontractors should establish an “open” relationship to exchange necessary information.

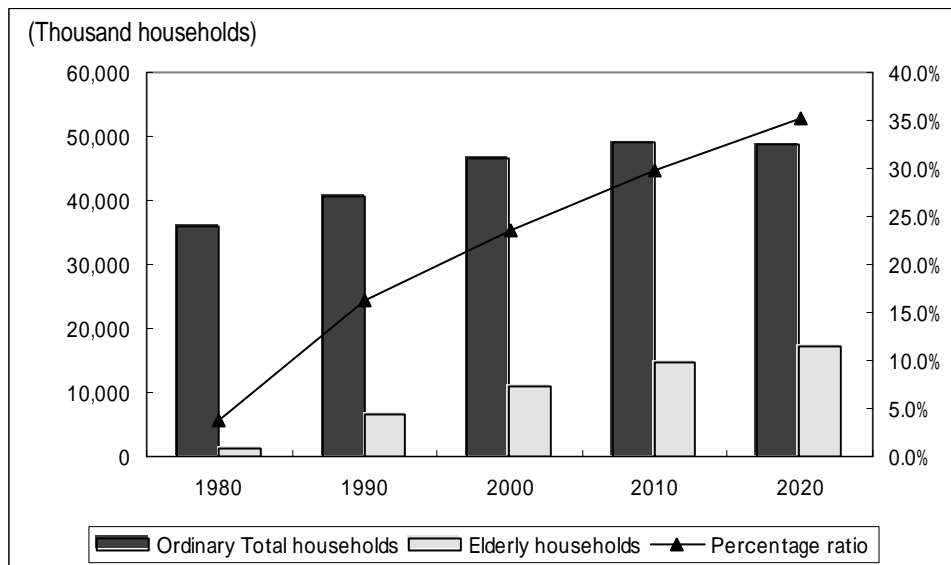
4.1 Housing in a Graying Society

- ◆ Japanese society is graying rapidly. Housing should be made elderly friendly, to ensure the independence of senior citizens and to reduce the burden on caregivers.
- ◆ Elderly people tend to live in old houses whose design may not be suitable for them. The potential market to repair these houses is estimated at around 4.5 trillion yen.
- ◆ To make housing elderly friendly the government should: a) guide the housing industry to build elderly friendly new houses and; b) offer subsidies for the repair of existing houses to make them easier for the elderly occupants to live in. The construction industry, on the other hand, should: a) ensure good-quality housing; b) develop affordable and attractive housing through advances in research and development and; c) market such houses more effectively.

The rapidly graying Japanese society

The number of elderly households increased, from 1.33 million in 1980 to 10.96 million in 2000, and is expected to reach 17.18 million (one out of three households) by 2020.

Trends in the number of total households and elderly households



Renovation to make houses “elderly friendly”

A new 4.47-trillion-yen market will emerge, assuming that existing houses with household members aged 65 and over will be repaired to be equipped with hand rails, have their bathrooms remodeled, and have height differences in floor levels eliminated.

Repair costs to make houses elderly friendly (existing housing stock)

Item	No. to be repaired (M housing units)	Unit cost of repairs (¥)	Total cost of repairs (¥M)
Handrails	835	91,400	763,190
Bathroom remodeling	981	207,250	2,003,123
Elimination of split-level flooring	1,224	136,675	1,672,902
Total			4,469,215

In addition a total of 114.5 billion yen should be spent annually to renovate houses of the elderly (houses with one or more members aged 65 or over)

Repair costs to make houses elderly friendly (annual increase)

Item	No. to be repaired (M housing units)	Unit cost of repairs (yen)	Total cost of repairs (¥M)
Handrails	23	91,400	21,002
Bathroom remodeling	26	207,250	53,885
Elimination of split-level flooring	29	136,675	39,636
Total			114,543

4.2 Community Renewal

- ◆ To revitalize local regions through a new system of Special Zones for Structural Reform, tax incentives and other financial measures should be taken for suitable projects on condition of the medium term financial balance. Deregulation to meet regional characteristics and needs should be taken.
- ◆ Special Zones for Structural Reform are expected to “release the brake” of regulation, whereas supporting measures, based on the Special Measures Law for Urban Renewal, can act as an “accelerator.” It is necessary for both to collaborate to optimize the benefits of the Special Zones.
- ◆ Regions should attempt to make public investment attractive and efficient through measures including: a) municipal mergers, b) benefit from NPO activities to involve citizens to maximize local attractiveness and uniqueness, and c) introduction of benchmarks to set clear goals and achieve better management.

Special Zones for Structural Reform

First-wave and second-wave accreditations of special zones were conducted this year. Most applications from local governments were accepted. However, the adopted measures seem to be composed of several possible measures rather than an attempt at deregulation to meet regional characteristics. For example, a special zone proposed by the City of Kobe requested 24 deregulatory measures to be approved but half of the requests were rejected as either impossible or in need of nationwide measures, and the approved measures were far from the “Bold deregulatory measures” initially proposed by the applicants.

Linking Special Zones for Structural Reform with urban renewal

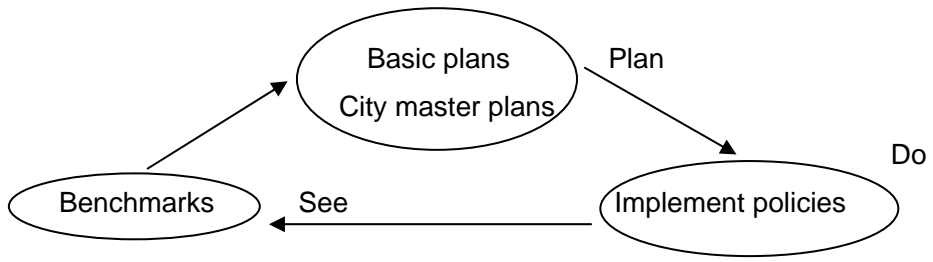
The system of Special Zones for Structural Reform is expected to be a “deregulatory measure to release the brake,” supporting measures based on the Special Measures Law for Urban Renewal, and functioning as an “accelerator” of regional renewal. If better linked, the speed of revitalization is expected to accelerate.

In an area slated as the Keihin Waterfront Urban Renewal Area, roads and other urban infrastructure will be improved (an “accelerator”), and the area will be designated as a special zone for structural reform, seeking to accommodate foreign researchers. Visa restrictions may be lifted to encourage the presence of foreign researchers (“releasing the brake”).

Benchmarks

"Benchmarks" here means a whole system of standards set for each policy area and target values. They are used by over 60% of municipalities in the United States, and can be effective tools for Japanese municipalities in stimulating communication and discussion among governments and citizens.

Image of benchmarks



Chapter 5 Overseas Trends

5.1 Trends in Overseas Construction Markets

- ◆ GDPs for the year 2001 by country and by region (Japan = 100) are as follows: 244 for the United States, 198 for Western Europe, 7 for Eastern Europe and 73 for Asia.
- ◆ The size of construction investment, (Japan = 100) are 168 for the United States, 92 for Western Europe, 5 for Eastern Europe and 92 for Asia.
- ◆ The proportion of construction investment in total GDP was 12.1% for Japan, 15.3% for Asia. This figure was lower in the United States (8.4%), Western Europe (5.6%) and Eastern Europe (7.8%).

Construction Markets by Country and by Region (Nominal value, converted to trillions of yen)

	Japan ¹ FY2001	United States 2001	Western Europe ² 2001	Eastern Europe ³ 2001	Asia ⁴ 2001
GDP	502.6 (100)	1,225.3 (243.8)	995.5 (198.1)	37.1 (7.4)	366.2 (72.9)
Construction Market	72.1 (100)	-	99.7 (138.3)	4.2 (5.8)	-
Proportion to GDP (%)	14.3	-	10.0	11.4	-
Construction Investment	60.8 (100)	102.4 (168.4)	56.0 (92.1)	2.9 (4.8)	56.2 (92.4)
Proportion to GDP (%)	12.1	8.4	5.6	7.8	15.3

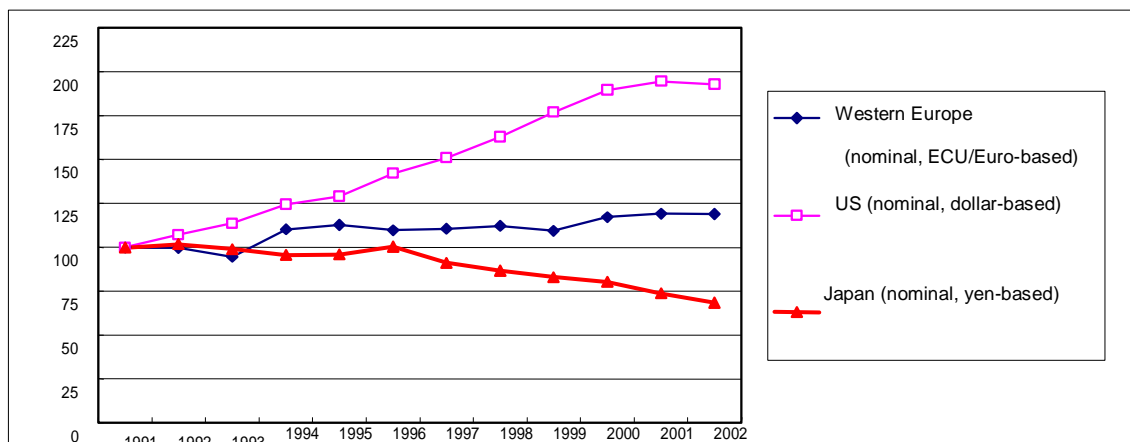
(Japan = 100)

Notes

1. Data for Japan is fiscal year (FY)-based. GDP is a forecast figure (by RICE), and the amount of construction investment is an outlook (by the Ministry of Land, Infrastructure and Transport).
2. "Western Europe" consists of 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and UK.
3. "Eastern Europe" consists of 4 countries: Czech Republic, Hungary, Poland and Slovakia.
4. "Asia" includes 12 countries and territories: China, Hong Kong, Taiwan, India, Indonesia, Korea, Malaysia, The Philippines, Singapore, Sri Lanka, Vietnam and Thailand. Construction investment data for China is as of 1999 and for Indonesia and Vietnam are as of 1998. The amount of orders received for construction work is used instead of construction investment amount for Malaysia.

US construction investment doubled in 10 years from 1991 and that of Western Europe increased by 20% during the same period, although growth is slowing. That of Japan, on the other hand, decreased to 74% of the 1991 figure.

Trends in construction investment of US, Western Europe and Japan (1991 = 100)



Trends in the U.S. construction investment

A significant fall in private non-housing investment in 2002 was offset by public investment and private housing investment. Although the housing construction market is still robust, public investment (public building investment in particular) fell in 2003. The amount of overall new investment was thus lower than that of the same month of the previous year. Public investment is likely to continue to decline due to stagnant local finance.

Trends in the U.S. construction investment

	1997	1998	1999	2000	2001	2002(r)	2003(p)	Composition ratio
New investment total	632,680	665,156	694,123	711,328	704,747	692,672	686,119	100.0
	2.7	5.1	4.4	2.5	-0.9	-1.7	-0.9	
Private-sector	487,197	519,859	540,220	556,426	542,782	524,776	523,200	76.3
	2.2	6.7	3.9	3.0	-2.5	-3.3	-0.3	
Housing	280,720	297,960	317,236	323,977	322,305	336,490	350,667	51.1
	-0.2	6.1	6.5	2.1	-0.5	4.4	4.2	
Non-housing, etc.	206,477	221,899	222,984	232,449	220,477	188,286	172,533	25.1
	5.6	7.5	0.5	4.2	-5.2	-14.6	-8.4	
Public works	145,483	145,297	153,904	154,902	161,965	167,895	162,920	23.7
	4.6	-0.1	5.9	0.6	4.6	3.7	-3.0	
Building	67,400	67,517	71,928	75,772	80,280	86,541	82,668	12.0
	6.2	0.2	6.5	5.3	5.9	7.8	-4.5	
Civil engineering, etc.	78,083	77,780	81,976	79,130	81,685	81,354	80,252	11.7
	3.1	-0.4	5.4	-3.5	3.2	-0.4	-1.4	

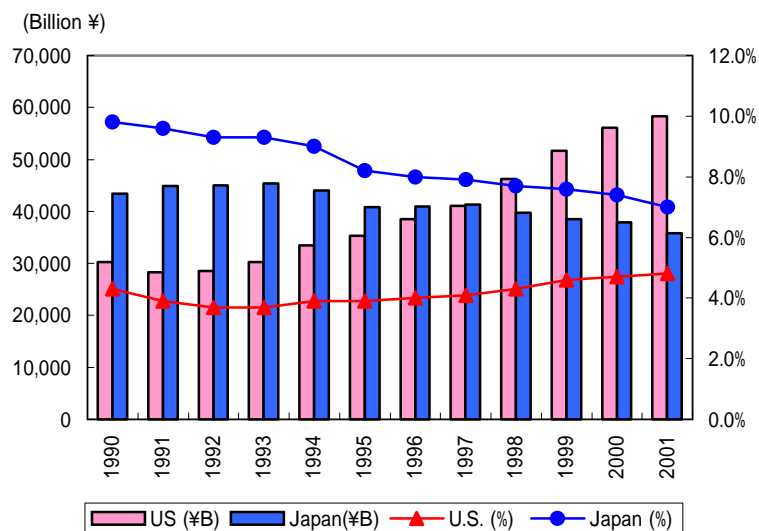
Notes:

1. Compiled from data from the Department of Commerce.
2. (r): Revised, (p): Preliminary
3. Figures for 2003 are seasonally adjusted figures as of April converted to annual figures (Amounts are of 1996 price).

5.2 Outline of the U.S. Construction Industry

- ◆ The proportion of construction production in total GDP since 1990 has ranged between 3.7% and 4.8% and is increasing slightly. (During the same period the figures for Japan dropped from 9.8% to 7.0%.)
- ◆ The business conditions of construction companies have improved over the 10-year period. The industry's profit rate rose from sixth to the fourth of among nine industries. Along with a long-term increase in construction investment, the industry's high-profit structure is likely to continue.
- ◆ The number of construction workers has been on the rise since 1994, and has remained at about 5% of all workers in the U.S. (the corresponding proportion in Japan is about 10%).

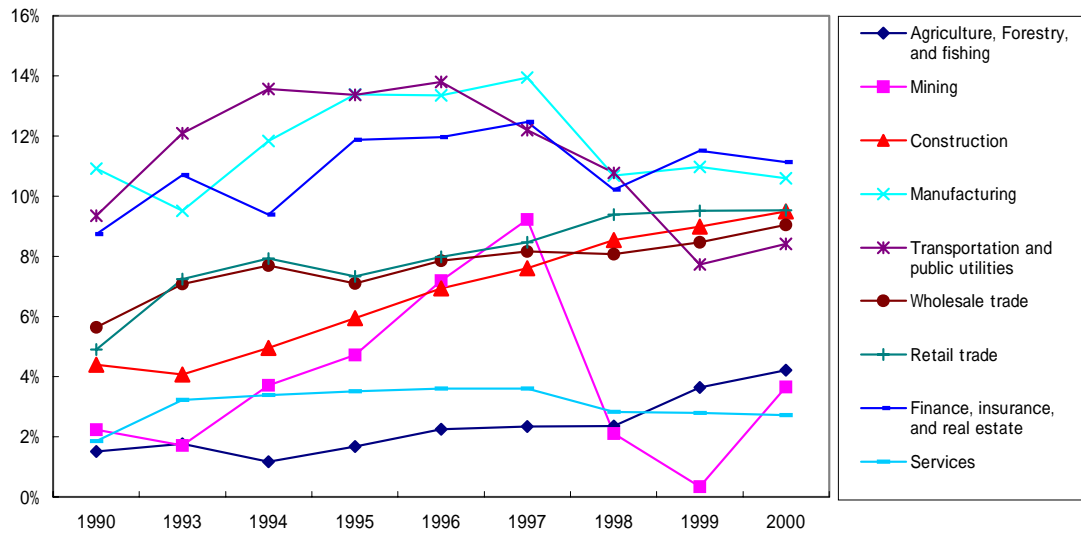
Construction production and GDP



Notes:

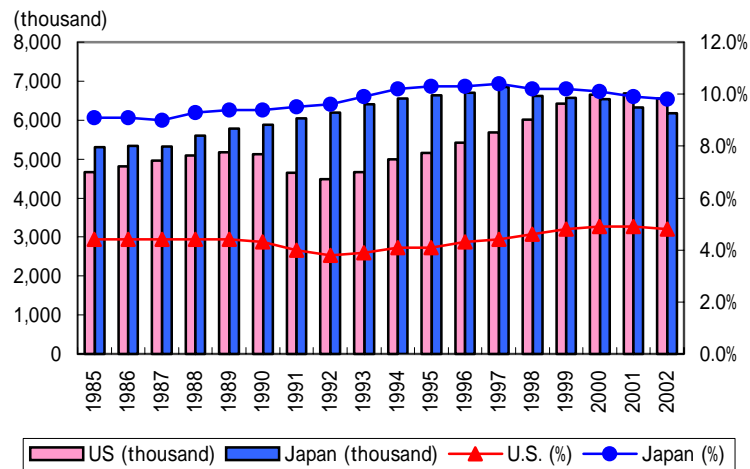
1. Compiled based on data from the Cabinet Office (Japan) and the U.S. Department of Commerce
2. Output for the US is calculated based on 2001 annual average exchange rate (\$US1 = ¥121.53)

Trends in profit ratio by industry



Note: Data from "Statistical Abstract of the U.S." by the U.S. Bureau of Economic Analysis (BEA)

Number of construction workers and ratio to all workers



Note: Data from *Kensetu Tokei Yoran* (Pocket-sized Statistics of Construction) and data from the US Department of Labor

U.S.-Japan comparison of construction indices

	Japan	US
1. Share of construction production in GDP (2001)	7.0%	4.8%
2. No. of construction companies (Japan 2001 and US 2000)	586 thou.	710 thou.
(1) Proportion of all companies (of all industries)	9.2%	10.0%
3. Number of construction workers (2002)	6,180 thou.	6,556 thou.
(1) Proportion of all workers	9.8%	4.8%
(2) Average age (2000)	41.5 yrs.	37.2 yrs.
(3) No. of female workers (2000)	15.0%	9.0%
(4) Percentage of workers with high school education and over (2000)	84.0%	79.1%
(5) Weekly working hours (2002)	42.4 hrs.	38.8 hrs.
4. No. of construction company business failures (1998)	5,440	9,588
(1) Proportion of all business failures	28.4%	13.3%

5.3 The Department of Homeland Security

- ◆ The U.S. Department of Homeland Security (DHS), comparable in size with the Department of Defense established in 1947, was set up in January this year by merging 22 federal agencies. It has 170 thousand employees. The DHS is now establishing systems to be shared by merged agencies, coordinating with the FBI (Federal Bureau of Investigation), CIA (Central Intelligence Agency) and other federal agencies, and supporting local polices and fire departments (first responders who are “first on the scene” after a terrorist attack) to better coordinate federal-local relationships. Conflicts between the authority of the federal government in carrying out missions of the DHS and the established authority of local governments are emerging, and many issues need to be overcome.

The idea behind the establishment of the DHS

U.S. government is founded on a federal system. Based on the notion that no federal law preceding state laws should be established, no new authority is given to the DHS. Public services, including financial and personnel preparedness to offer emergency services at a time of terrorist attack, are the responsibility of local governments (FR or first responders which include police and fire departments). The federal government supplements state and local governments by collecting/disseminating information, offering subsidies, and preparing training programs and guidelines.

Federal-local conflicts in homeland security

Police services and protection of citizens' safety and health have traditionally been the responsibility of state and local governments. Since the establishment of DHS there have been fears of an unnecessary expansion of federal authority in the name of homeland security. The federal authority in question is more of the Department of Justice or the Department of Defense than the DHS. “Homeland security is a national strategy, not a federal strategy” (President Bush). The conflict between the federal government and state and local governments, over expanding federal authority, is likely to continue.

Examples of conflicts are as follows:

- The Department of Justice to expand its powers to be able to revoke the U.S. citizenship of anyone involved in terrorist activities
- The authority to issue and manage driver's licenses to be transferred from state governments to the federal government