

Middle- to Long-term Forecasts of Construction Investment

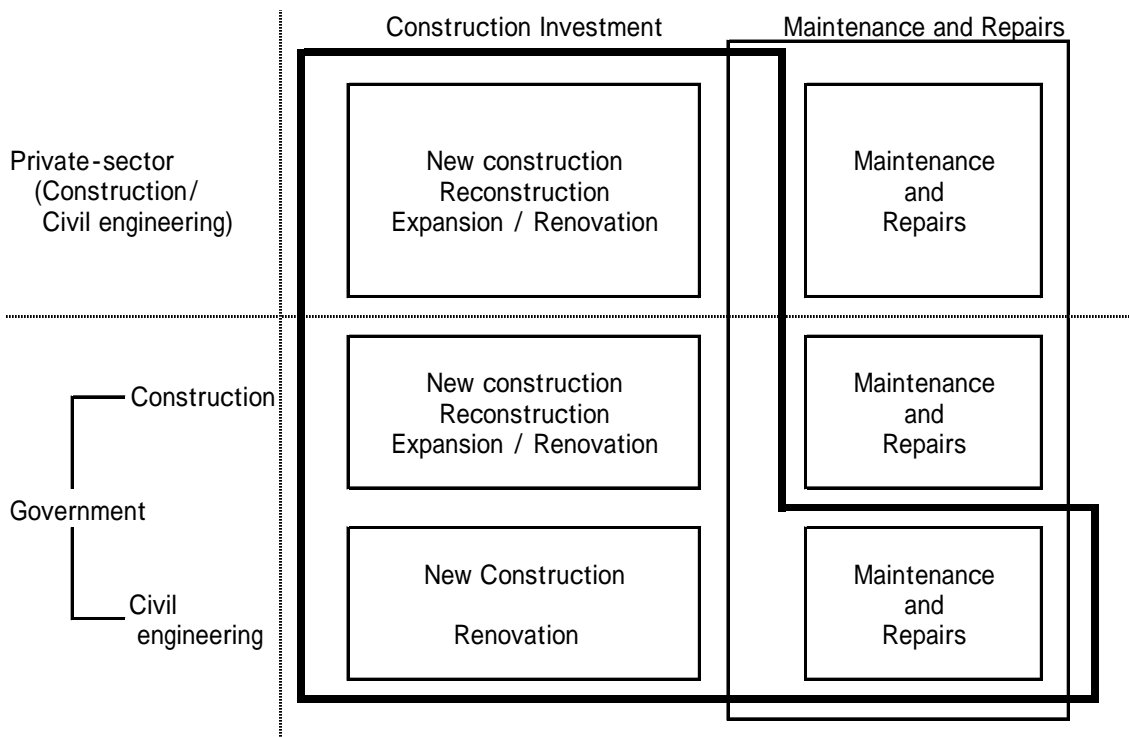
- Forecasts for FY2010 and FY2020 -

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Research Institute of Construction and Economy (RICE)

1. Sectors Covered by the Forecasts

- “Construction Investment” and “Maintenance and Repairs” covers the following areas.
- Forecasts are in real terms, based on FY1995 prices.



2. Forecast Assumptions

Economic growth rates (real):

- FY2004 and FY2005; 3.0% for FY2004 and 1.3% for FY2005 (figures taken from “Forecast of construction investment on the construction economy model” announced by RICE in July 2004).

- **FY2006 to FY2010: Hypothetical annual increase rate of 1.5%**
- **FY2011 to FY2010: Four hypothetical annual increase rates of 2.5%, 2.0%, 1.5% and 1.0%**

3. Overall Forecast Results

(Units:trillion yen)

	(Reference) FY2003 (nominal)		Case 1		Case 2		Case 3		Case 4	
			FY2006-2010	FY2011-2020	FY2006-2010	FY2011-2020	FY2006-2010	FY2011-2020	FY2006-2010	FY2011-2020
			GDP; +1.5%	GDP; +2.5%	GDP; +1.5%	GDP; +2.0%	GDP; +1.5%	GDP; +1.5%	GDP; +1.5%	GDP; +1.0%
			FY2010	FY2020	FY2010	FY2020	FY2010	FY2020	FY2010	FY2020
Construction Investment	55.2	53.9	48.4 ~ 51.5	48.2 ~ 51.4	47.6 ~ 50.8	45.1 ~ 48.3	47.3 ~ 50.5	42.7 ~ 45.8	46.9 ~ 50.1	39.9 ~ 43.1
Government	23.5	23.0	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5	15.3 ~ 18.5
Private sector	31.7	30.9	33.0	32.8	32.3	29.8	32.0	27.3	31.5	24.6
Housing	18.4	17.9	17.9	14.4	17.9	14.0	17.9	13.7	17.9	13.3
Non-housing (building)	8.0	7.8	9.5	12.7	9.1	10.6	8.9	9.0	8.6	7.2
Non-housing (civil engineering)	5.3	5.2	5.5	5.7	5.3	5.1	5.2	4.7	5.0	4.0
(Four Highway Corporations)	—	—	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

	(Reference) FY2003		Case 1		Case 2		Case 3		Case 4	
			2006-2010年度	FY2011-2020	FY2006-2010	FY2011-2020	FY2006-2010	FY2011-2020	FY2006-2010	FY2011-2020
			GDP; +1.5%	GDP; +2.5%	GDP; +1.5%	GDP; +2.0%	GDP; +1.5%	GDP; +1.5%	GDP; +1.5%	GDP; +1.0%
			FY2010	FY2020	FY2010	FY2020	FY2010	FY2020	FY2010	FY2020
Maintenance & Repairs	22.4	24.2 ~ 24.4	28.1 ~ 28.5	24.1 ~ 24.3	27.8 ~ 28.0	24.1 ~ 24.2	27.4 ~ 27.6	24.0 ~ 24.2	27.0 ~ 27.1	
Government	6.3	5.8 ~ 6.0	5.7 ~ 6.0	5.8 ~ 6.0	5.9 ~ 6.0	5.8 ~ 6.0	5.9 ~ 6.0	5.8 ~ 6.0	5.9 ~ 6.0	
Civil engineering	5.4	5.1 ~ 5.2	4.9 ~ 5.1	5.1 ~ 5.2	4.9 ~ 5.1	5.1 ~ 5.2	4.9 ~ 5.1	5.1 ~ 5.2	4.9 ~ 5.1	
Housing	0.3	0.2 ~ 0.2	0.2 ~ 0.3	0.2 ~ 0.2	0.4 ~ 0.3	0.2 ~ 0.2	0.4 ~ 0.3	0.2 ~ 0.2	0.4 ~ 0.3	
Non-housing	0.6	0.5 ~ 0.6	0.6 ~ 0.7	0.5 ~ 0.6	0.6 ~ 0.7	0.5 ~ 0.6	0.6 ~ 0.7	0.5 ~ 0.6	0.6 ~ 0.7	
Private sector	16.2	18.4	22.4	18.3	21.9	18.2	21.6	18.2	21.1	
Housing	7.2	8.1	9.5	8.1	9.5	8.1	9.5	8.1	9.5	
Non-housing (building)	6.9	7.6	9.0	7.6	9.0	7.6	8.9	7.6	8.9	
Non-housing (civil engineering)	2.1	2.7	3.9	2.6	3.4	2.5	3.2	2.5	2.7	
(Four Highway Corporations)	—	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	

Notes: 1. Figures are all real based on FY1995 prices, unless otherwise stated.

2. GDP growth rates for FY2004 and FY2005 are based on the forecast made by RICE in "Forecast of construction investment based on the construction economy model."

3. Construction investment for FY2003 is from "FY2004 construction investment outlook (June 2004)" by the Ministry of Land, Infrastructure and Transport.

4. The forecast of the size of government construction investment based on demand is not necessarily accurate as it is finally determined by the policy makers.

Several different rates, therefore, were used in the forecast.

5. Figures for maintenance and repairs, including the figure in FY2003, are based on estimates by RICE.

6. Due to a conventional method of classification, the maintenance and repairs of the government civil engineering sector is included both in "Construction investment" and "maintenance & repairs" in the forecast.

7. Figures have been rounded off, and the totals may not match.

8. Four highway corporations are removed from the government and included in the private sector from 2006 (the year when they are scheduled to be privatized).

4. Major Results

(1) Construction Investment

Construction investment of 55.2 trillion yen in FY2003 is expected to decline to 46.9– 51.5 trillion yen in FY2010, and 39.9– 51.4 trillion yen in FY2020.

a) Government construction investment

Government construction investment, which peaked in FY1995, is expected to shrink to 43% to 52.6% of the 1995 figure after FY2010.

Government construction investment (in trillion yen)

FY1995	FY2003 (estimate)	FY2010 (forecast)	FY2020 (forecast)
35.2	23.5	15.3 – 18.5	15.3 – 18.5

Percent annual change by scenario

		FY2004 *	FY2005 *	FY2006 – FY2020 **
Case A	National and local governments and local public corporations	- 11.9%	-4.6%	0%
Case B	National government	- 12.0%	-4.0%	-3% (FY2006-FY2008) 0% (FY2009-FY2020)
	Local governments and local public corporations	- 11.8%	-5.6%	0%
Case C	National government	- 12.0%	-4.0%	-3% (FY2006-FY2008) 0% (FY2009-FY2020)
	Local governments and local public corporations	- 11.8%	-5.6%	-5% (FY2006-FY2008) 0% (FY2009-FY2020)
Case D	National government	- 12.0%	-4.0%	-3% (FY2006-FY2010) 0% (FY2011-FY2020)
	Local governments and local public corporations	- 11.8%	-5.6%	-5% (FY2006-FY2010) 0% (FY2011-FY2020)

* Percent change in the amount of government construction investment

** Percentage change in budget size

b) Private-sector housing investment

Number of new housing starts (in million units)

FY2003 (estimate)	FY2010 (forecast)	FY2020 (forecast)
1.17	1.09	0.81

Note: Calculations are based on the expected changes in the number of households, housing vacancy rate and the number of houses to be replaced.

Private-sector housing investment (in trillion yen)

FY2003 (estimate)	FY2010 (forecast)	FY2020 (forecast)
18.4	17.9	13.3 – 14.4

Although the floor area per housing unit and the construction unit cost are expected to increase slightly, the decrease in the total number of new housing starts (and renovation and reconstruction as a result of fewer houses being built) is likely to result in a decrease in total investment.

c) Private-sector non-housing construction investment

Private-sector non-housing construction investment (in trillion yen)

FY2003 (estimate)	FY2010 (forecast)	FY2020 (forecast)
13.3	13.6 – 15.1	11.3 – 18.4

The totals were calculated from the estimated total floor area by use (office, shop, factory, warehouse, accommodation, school, hospital, etc.). Private-sector non-housing construction investment is expected to level off if the annual economic growth rate is around 1.5%, but increase if the rate is above that level. Private-sector civil engineering investment will be likely to shrink.

(2) Maintenance and Repairs

Investment in maintenance and repairs (in trillion yen)

FY2003 (estimate)	FY2010 (forecast)	FY2020 (forecast)
22.4	24.0 – 24.4	27.0 – 28.5

Estimates are based on the size of stock and how maintenance and repairs works have been conducted. The amount of investment in maintenance and repairs will continue to grow as the vast stocks of social infrastructure and private buildings and structures built during the high economic growth period begin to deteriorate.