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RICE

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COUNTRY REPORT（Japan）

Ⅰ．Overview

Japan's construction investment on a single-year peaked at approximately 84.0 trillion yen in fiscal 1992, then dropped sharply, and temporarily dropped to about 40-50 trillion yen, about half of the peak. Since then, public investment, centered on the March 2011 Great East Japan Earthquake recovery and reconstruction projects, has boosted the economy which is on a recovery trend. Until now, construction investment has increased moderately and is on a stable trend.

In fiscal 2022, social and economic activities are recovering due to both measures against Covid 19 and measures protecting the economy, and private non-housing construction investment will continue to recover. However, the investment on real terms is expected to fall below the previous year because of the increase of the price of materials. In FY2023, investment is expected to increase slightly, on the real basis and is expected to exceed the previous year on nominal terms.

The recent circumstances of the construction industry in Japan are summarized as below.

（1） The number of authorized construction companies increased slightly by 0.08% in FY2022 compared to the previous year, decreasing by 21.1% compared to the peak in 2000.

（2） The number of the construction industry workers decreased by 2.0% from the previous year in FY2021, showing a slight downward trend in recent years. Even though the number of young people has been on a slight upward trend since around 2013, aging remains an issue.

（3） Construction costs had been on an upward trend until 2019, and have remained stable over the recent three years.

（4） The wages of men in the construction industry have continued to be low compared to other industries, but since 2016 they have surpassed those in other industries.

（5） Japan's overseas construction orders in FY2020 decreased to about half of FY2019 due to the impact of the global recession, but recovered in FY2021, reaching 1,785.5 billion yen.

Ⅱ. Macroeconomic Review and Prospects

1. Overview of Japanese Economy

In fiscal 2022, economic and social activities are recovering due to both measures against infectious of Covid-19 and measures protecting the economy, and the domestic economy is picking up. Overall construction investment in real terms is expected to fall below the previous year's level as demand for private housing constructions investment slows down due to rising costs. On the other hand, due to the impact of recent price hikes, overall construction investment on a nominal terms is expected to increase slightly compared to the previous fiscal year.

In FY2023, although private housing constructions investment will not recover, private non-housing construction investment is expected to remain strong, the nominal investment is expected to exceed the level of the previous fiscal year.

Figure.1 Macroeconomic Trends

(Unit: Billion yen)

Fiscal Year	2017	2018	2019	2020	2021	2022 (Forecast)	2023 (Forecast)
Real GDP (2015 prices)	553,174	554,546	550,131	527,389	540,796	550,456	554,216
(Y o Y change)	1.8%	0.2%	-0.8%	-4.1%	2.5%	1.8%	0.7%
Real Private Final Consumption Expenditure	302,186	302,359	299,547	284,373	288,614	296,116	299,643
(Y o Y change)	1.0%	0.1%	-0.9%	-5.1%	1.5%	2.6%	1.2%
(Contribution rate)	0.6	0.0	-0.5	-2.8	0.8	1.4	0.6
Real Private Housing	20,912	19,903	20,405	18,853	18,650	18,174	18,419
(Y o Y change)	-1.8%	-4.8%	2.5%	-7.6%	-1.1%	-2.6%	1.4%
(Contribution rate)	-0.1	-0.2	0.1	-0.3	0.0	-0.1	0.0
Real private corporate facilities	90,286	91,687	90,612	85,424	87,178	90,587	91,796
(Y o Y change)	2.8%	1.6%	-1.2%	-5.7%	2.1%	3.9%	1.3%
(Contribution rate)	0.5	0.3	-0.2	-0.9	0.3	0.6	0.2
Real government final consumption expenditure	107,494	108,680	110,974	113,938	117,823	119,099	120,243
(Y o Y change)	0.3%	1.1%	2.1%	2.7%	3.4%	1.1%	1.0%
(Contribution rate)	0.1	0.2	0.4	0.5	0.7	0.2	0.2
Real public fixed asset formation	27,395	27,628	28,081	29,462	27,563	26,762	26,738
(Y o Y change)	0.6%	0.9%	1.6%	4.9%	-6.4%	-2.9%	-0.1%
(Contribution rate)	0.0	0.0	0.1	0.3	-0.4	-0.1	0.0
Real inventory increase	1,941	2,154	885	-858	1,113	2,005	548
(Y o Y change)	5075.5%	11.0%	-58.9%	-196.9%	-229.7%	80.2%	-72.7%
(Contribution rate)	0.4	0.0	-0.2	-0.3	0.4	0.2	-0.3
Real financial services net exports	3,277	2,300	-353	-4,114	430	-1,305	-2,189
(Y o Y change)	321.4%	-29.8%	-115.3%	1065.4%	-110.5%	-403.4%	67.7%
(Contribution rate)	0.5	-0.2	-0.5	-0.7	0.9	-0.3	-0.2
Nominal GDP	555,712	556,571	556,836	537,562	550,530	564,378	581,213
(Y o Y change)	2.0%	0.2%	0.0%	-3.5%	2.4%	2.5%	3.0%

Source : Construction and Economic Forecasts (RICE) for 2022 and 2023, Until 2021 SNA(Cabinet Office)

2. Major Economic Indicators

Major economic indicators are shown in Figure 2.

Figure.2　List of Major Economic Indicators

	2017	2018	2019	2020	2021	2022 (Forecast)	2023 (Forecast)
GDP (Real,（2015prices）, billion yen)	553,174	554,546	550,131	527,389	540,796	550,456	554,216
GDP (Nominal, billion yen)	555,712	556,571	556,836	537,562	550,530	564,378	581,213
GDP growth	2.0%	0.2%	0.05%	-3.5%	2.4%	2.5%	3.0%
Agriculture, forestory, and fishery	0.7%	-6.7%	4.3%	-7.5%	3.3%	-	-
Manufacturing	4.1%	3.4%	-1.8%	-6.0%	7.5%	-	-
Accommodation・Food service	3.0%	0.0%	-6.2%	-35.7%	-11.1%	-	-
Mining	7.9%	-2.1%	-5.3%	-4.9%	-5.2%	-	-
Construction	2.1%	-0.7%	-0.9%	-0.6%	-2.8%	-	-
	2017	2018	2019	2020	2021	2022	2023
Demographic Indicators							
Population (thousands) [1]	126,919	126,749	126,555	126,146	125,502	124,830	124,630
Population growth rate	-0.1%	-0.1%	-0.2%	-0.3%	-0.5%	-0.5%	-0.2%
Total labor force (thousands) [2]	67,320	68,490	69,120	69,020	69,070	69,020	68,540
Labor force growth rate	0.8%	1.7%	0.9%	-0.1%	0.1%	-0.1%	-0.7%
Unemployment rate [2]	2.8%	2.4%	2.4%	2.8%	2.8%	2.6%	2.4%
Inflation rate [3]	0.7%	0.7%	0.5%	-0.2%	0.1%	2.5%	4.3%
Financial Indicators							
Interbank interest rate	0.06727%	0.06909%	0.06909%	0.07909%	0.06727%	0.06364%	-
Short-term interest rate	-0.062%	-0.055%	-0.068%	-0.033%	-0.018%	-0.022%	-
Long-term interest rate [4]	0.061%	0.082%	-0.090%	0.005%	0.065%	0.211%	0.493%
Exchange rate against US$（yen) [5]	112.16	110.4	109.01	106.78	109.78	131.37	131.49

Source : Construction and Economic Forecasts (RICE, January 2023), SNA(Cabinet Office),Population Estimates, Labour Force Survey, Change of the consumer price index (Ministry of Internal Affairs and Communications), Financial and Economic Statistics Monthly Report, Major Time Series Statistical Data (Bank of Japan)

1　Population is the value as of October 1 each year. The value of 2022 is estimated values and the value of 2023 is February estimated values for 2023.

2　Labor force and unemployment rate are annual average results. The value of 2023 is January 2023 values.

3　The inflation rate is the ratio of the average consumer price index to the previous year. About the value of 2023, we use the figures for January to calculate the ratio of the previous year.

4　Long-term interest rates are 12-month averages for each year. The value of 2018 is an eight-month average, and the value of 2023 is a two-month average.

5　The exchange rate against the US dollar is based on the "Tokyo market dollar/yen spot at 17:00/monthly average". 2023 is the average of the two months.

III. Outline of Construction Industry

1. Construction Investment Forecast

Construction investment in FY2022 is expected to increase by 1.5% from the previous year to 67.62 trillion yen, based on the assumption that part of the amount related to the third supplementary budget for FY2020 will be realized in FY2022 and the initial budget for FY2022 and local independent project budget will be at the same level as the previous year.

As for private housing investment, the number of new housing starts continues to decline compared to the same month of the previous year, due to concerns about rising construction costs and housing loan interest rates. As a result, although the real value base will fall below the previous year's level, but the nominal value base is expected to increase slightly compared to the previous year due to price increases. Private non-housing construction investment is expected to increase at a level higher than that of the previous fiscal year due to strong enterprise investment in equipment, etc. However, we are needed to monitor developments in the economic and financial markets, such as soaring material and energy prices.

Figure.3 Construction Investment Forecast

(Unit: Billion yen)

Fiscal Year	2017	2018	2019 (Prospects)	2020 (Prospects)	2021 (Forecast)	2022 (Forecast)	2023 (Forecast)
Nominal construction investment	61,325	61,827	62,328	65,360	66,600	67,620	69,900
(Y o Y change)	4.4%	0.8%	0.8%	4.9%	1.9%	1.5%	3.4%
Nominal government construction investment	21,780	21,591	22,480	24,430	23,390	23,540	23,990
(Y o Y change)	3.8%	-0.9%	4.1%	8.7%	-4.3%	0.6%	1.9%
Nominal private housing construction	16,942	16,737	16,312	15,260	16,110	16,500	16,800
(Y o Y change)	2.9%	-1.2%	-2.5%	-6.4%	5.6%	2.4%	1.8%
Nominal private non-housing construction	16,312	16,976	17,047	17,270	17,740	19,290	19,940
(Y o Y change)	6.8%	4.1%	0.4%	1.3%	2.7%	8.7%	3.4%
Nominal private building repair	6,291	6,323	6,489	8,400	9,360	8,290	9,170
(Y o Y change)	4.5%	0.5%	2.6%	29.4%	11.4%	-11.4%	10.6%
Real construction investment(2011 prices)	59,976	58,573	57,679	60,547	58,907	56,400	57,156
(Y o Y change)	2.4%	-2.3%	-1.5%	5.0%	-2.7%	-4.3%	1.3%

Source : Construction and Economic Forecast (RICE) for 2022 and 2023 , Construction Investment Forecasts (MLIT) for the other years

2. Construction Companies

As of the end of March 2022, the number of licensed construction companies in Japan is 474,000, an increase of 0.08% compared to the same month of the previous year. Compared to March 2000 when the number of aouthorized construction companies was the highest (601,000 companies), it decreased by 127,000 companies (-21.1%).

Looking at the number of aouthorized construction contractors by capital level, 40.8% of companies are “corporations with capital of 3 million yen or more and less than 10 million yen,” followed by “corporations with capital of 10 million yen or more and less than 20 million.” (21.0%) and "Sole proprietor" (14.8%).

Figure.4 Transitions of Numbers of Construction Companies

Year (In March)	2000		2017		2018		2019		2020		2021		2022	
	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total
No. of registered contractors (total)	601.4	-	465.5	-	464.9	-	468.3	-	472.5	-	474.0	-	474.4	-
Breakdown of registered contractors by size classification														
Sole proprietor	158.2	26.3%	81.9	17.6%	78.5	16.9%	77.2	16.5%	75.8	16.0%	73.5	15.5%	70.0	14.8%
Corporation with less than ¥3 million in capital	1.0	0.2%	17.6	3.8%	20.5	4.4%	22.6	4.8%	25.1	5.3%	28.3	6.0%	31.2	6.6%
Corporation with ¥3 million up to ¥10 million in capital	195.3	32.5%	182.7	39.2%	184.5	39.7%	187.0	39.9%	189.9	40.2%	191.5	40.4%	193.6	40.8%
Corporation with ¥10 million up to ¥20 million in capital	166.0	27.6%	106.1	22.8%	103.9	22.4%	103.4	22.1%	102.9	21.8%	101.3	21.4%	99.5	21.0%
Corporation with ¥20 million up to ¥100 million in capital	74.1	12.3%	71.7	15.4%	72.0	15.5%	72.7	15.5%	73.4	15.5%	73.9	15.6%	74.6	15.7%
Corporation with ¥100 million up to ¥1 billion in capital	4.8	0.8%	4.1	0.9%	4.2	0.9%	4.2	0.9%	4.2	0.9%	4.2	0.9%	4.2	0.9%
Corporation with ¥1 billion up to ¥10 billion in capital	1.6	0.3%	0.9	0.2%	0.9	0.2%	0.9	0.2%	0.9	0.2%	0.9	0.2%	0.9	0.2%
Corporation with ¥10 billion or more in capital	0.4	0.1%	0.3	0.1%	0.3	0.1%	0.3	0.1%	0.3	0.1%	0.3	0.1%	0.3	0.1%

Source: Survey of on the Number of Licensed Construction Companies (MLIT)

The number of construction consultant businesses is shown in the figure below.

Figure.5 Number of Registered Construction-Related Businesses (By Business Type and Net Registered Number)

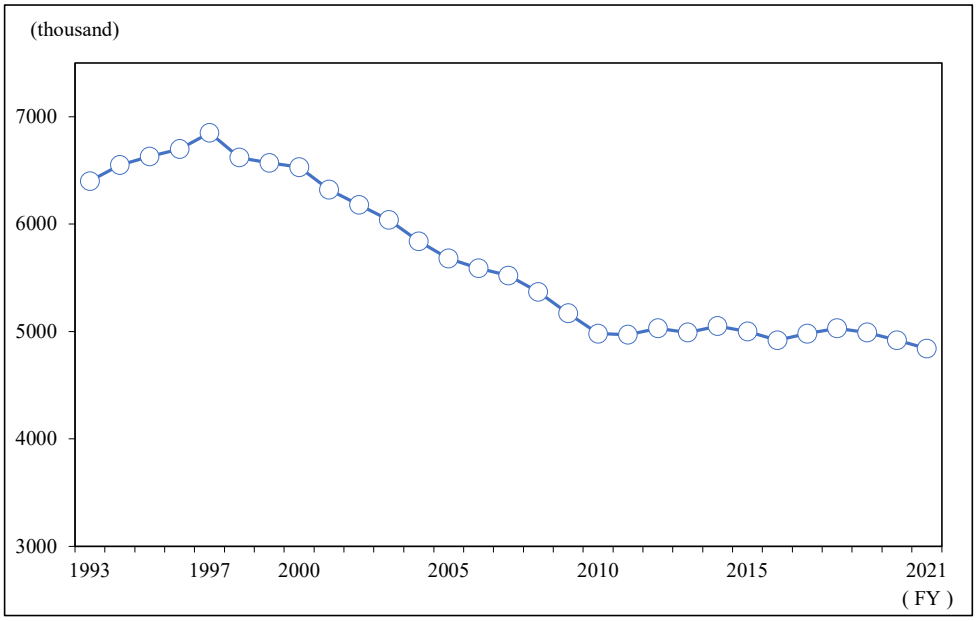
Business Type	Fiscal Year	2017	2018	2019	2020	2021
Surveying	No. of registered companies	11,917	11,800	11,707	11,630	11,576
	YoY change (%)	-0.3	-1.0	-0.8	-0.7	-0.5
Construction consulting	No. of registered companies	3,944	3,963	3,957	3,656	3,959
	YoY change (%)	-0.2	0.5	-0.2	-7.6	8.3
Geological surveying	No. of registered companies	1,277	1,274	1,267	1,270	1,268
	YoY change (%)	0.9	-0.2	-0.5	0.2	-0.2
Net number of companies	No. of registered companies	13,340	13,241	13,119	13,055	12,979
	YoY change (%)	-0.5	-0.7	-0.9	-0.5	-0.6

Source: Registration Status of Construction-Related Companies (MLIT)

3. Employees and Construction Labor

Figure 6 shows changes in the number of workers in the construction industry. The number of construction workers in 2021 is 4.82 million, down 29.6% from 6.85 million in 1997.

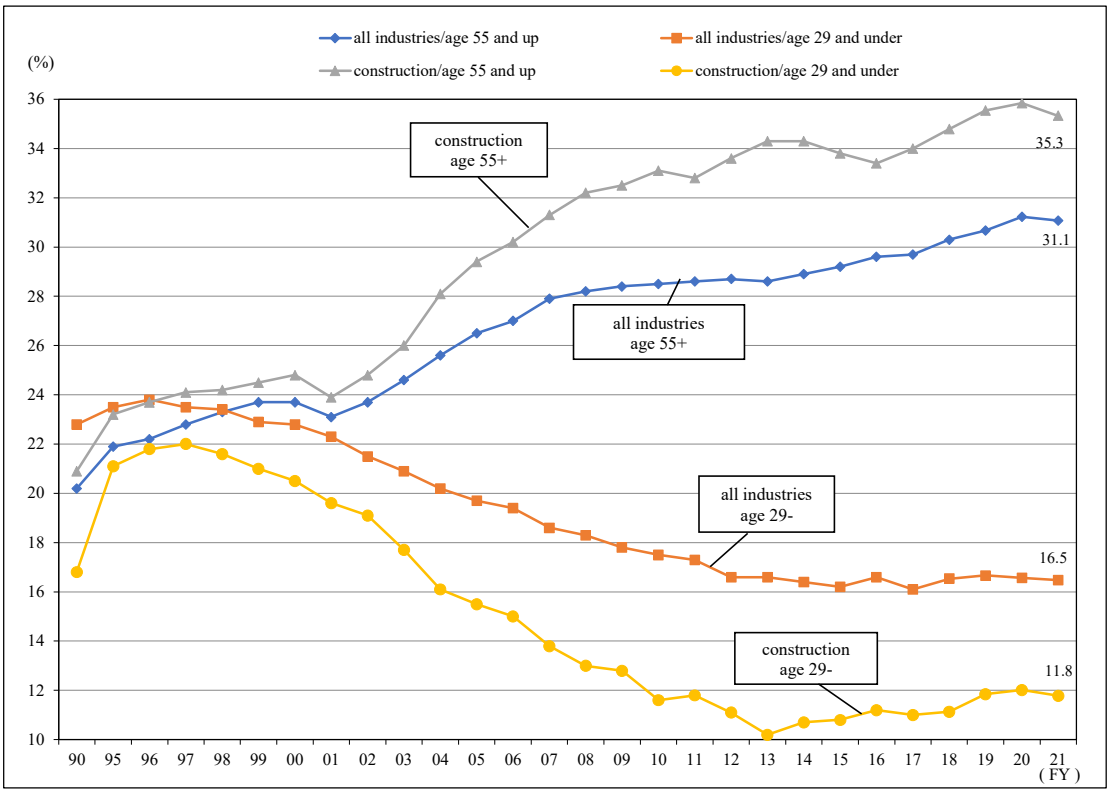
Figure.6 Transitions of Numbers of Construction Industry Employees



Source : Labor Force Survey (Ministry of Internal Affairs and Communications)

Looking at the changes in the age composition of workers in the construction industry (Figure.7), in 2021, 35.3% is 55 or older, and 11.8% is 29 or younger. Although the ratio of young people has been a slight upward trend since around 2013, no change in aging, and passing on skills to the next generation is a major issue.

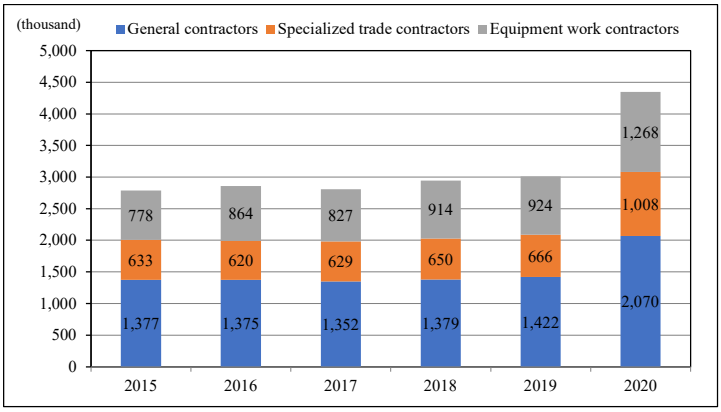
Figure.7　Age Composition of Construction Industry Employees



Source : Labor Force Survey　(Ministry of Internal Affairs and Communications)

Looking at the number of construction workers by occupation in the construction industry (Figure.8), general contractors: 2,070,000 (47.6%), specialized trade contractors: 1,008,000 (23.2%), equipment work contractors: 1,268,000 (29.2%), total is 2,808,000 people. Note that the sum of these numbers does not necessarily match the numbers in Figure.6.

Figure.8　Number of Construction Industry Employees by types



Source: Statistics on Construction Projects Implemented (MLIT)

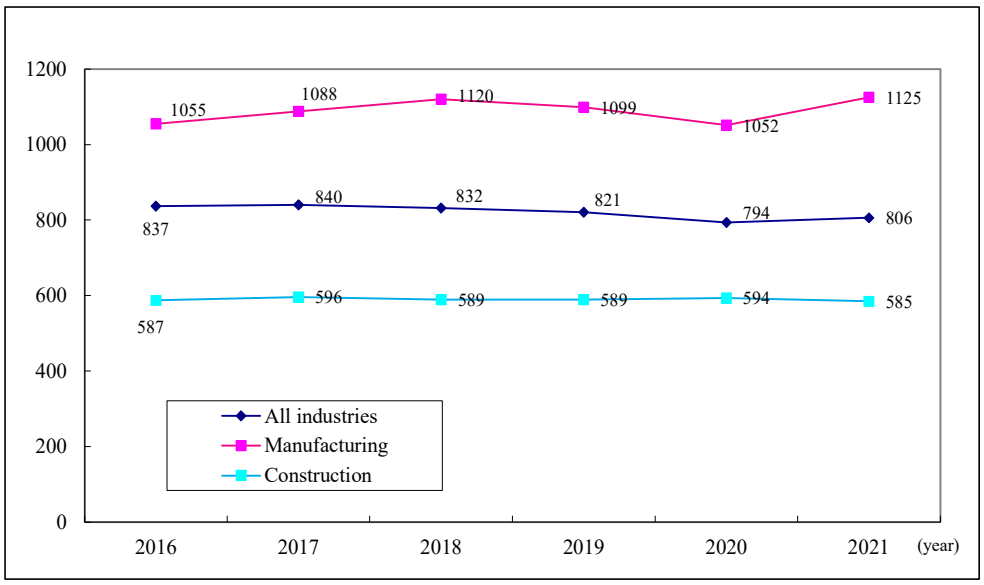
(Note) This result was compiled by the Ministry of Land, Infrastructure, Transport and Tourism from the figures for contractors who filled in the survey forms regarding their construction activities. The added numbers do not match the figures in Figure.6.

4. Productivity

Figure 9 shows changes in real labor productivity in the construction industry. The reason why labor productivity in the construction industry is lower than in other industries such as manufacturing is thought to be that there are factors that hinder productivity at construction sites and at companies. Some factors are summarized below.

- Due to single-item build-to-order manufacturing, construction work is highly individualized for each work and is greatly influenced by the intention of the person ordering the work, making it difficult to standardize and rationalize work. After the start of construction, specification changes and complaints are often handled, which may lead to long working hours.
- It is considered that the improvement of the productivity of the site, which brings about a major change in the production system, has not been sufficiently promoted.
- It is thought that the production system has become inefficient due to multiple layers of subcontracting.

Fig. 9 Trends in Real Labor Productivity in the Construction Industry



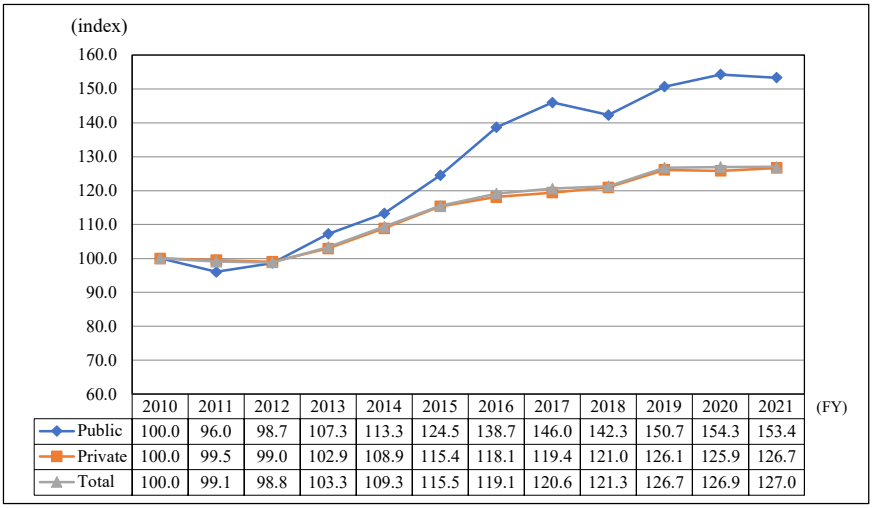
Source: SNA (Cabinet Office)
(Notes) Real labor productivity =Real GDP / (no. of workers × working hours)

5. Construction Costs

(1) Trends in the expected construction costs per floor area of new starts

The Fifure.10 shows the indexed changes in the amount of construction costs per floor area to be started, based on the year 2010. The index has continued to rise. This could be attributed to a rise in labor unit prices.

Fig. 10 Trends in the expected construction costs per floor area of new starts



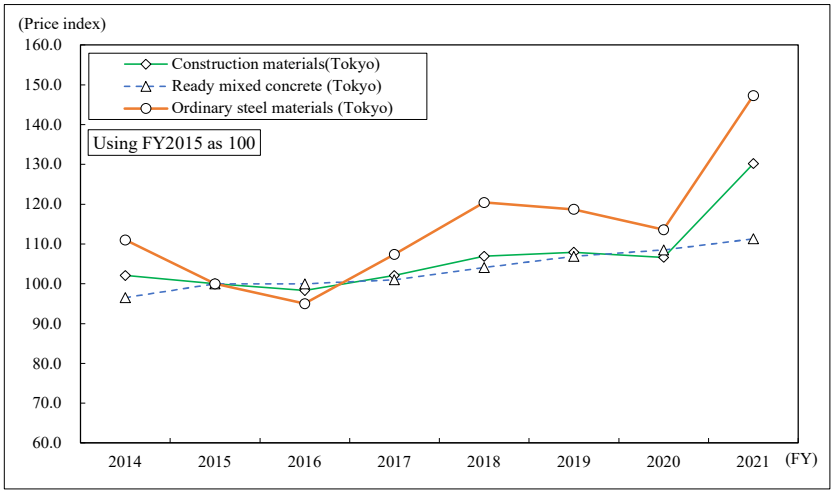
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Public	100.0	96.0	98.7	107.3	113.3	124.5	138.7	146.0	142.3	150.7	154.3	153.4
Private	100.0	99.5	99.0	102.9	108.9	115.4	118.1	119.4	121.0	126.1	125.9	126.7
Total	100.0	99.1	98.8	103.3	109.3	115.5	119.1	120.6	121.3	126.7	126.9	127.0

Source: Statistics on Building Starts (MLIT)

(2) Price of construction materials

Figure 11 shows the indexed changes in the price trends of construction materials, ready-mixed concrete, and ordinary steel indexed based on the 2010. Recently, the soaring material prices have become an issue.

Figure. 11 Indexed changes in the price trends

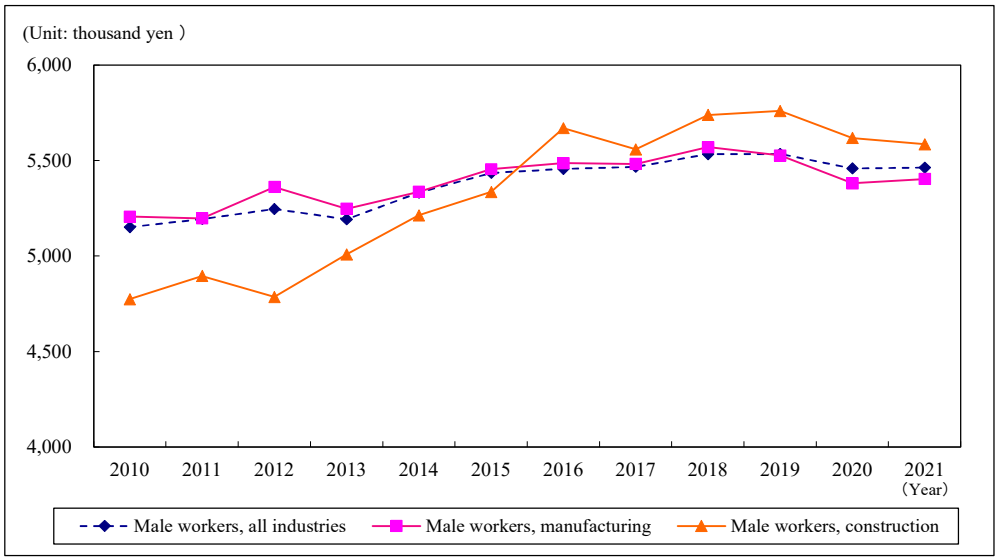


Source: Construction material price index(Economic Research Association)

(3) Construction Industry Wages

The average wages of production workers in the construction industry used to be lower than in other industries, but since around 2013 they have been rising faster than in the manufacturing industry, and since 2016 have surpassed those in other industries. The average wage for construction workers in 2021 is 465,000 yen.

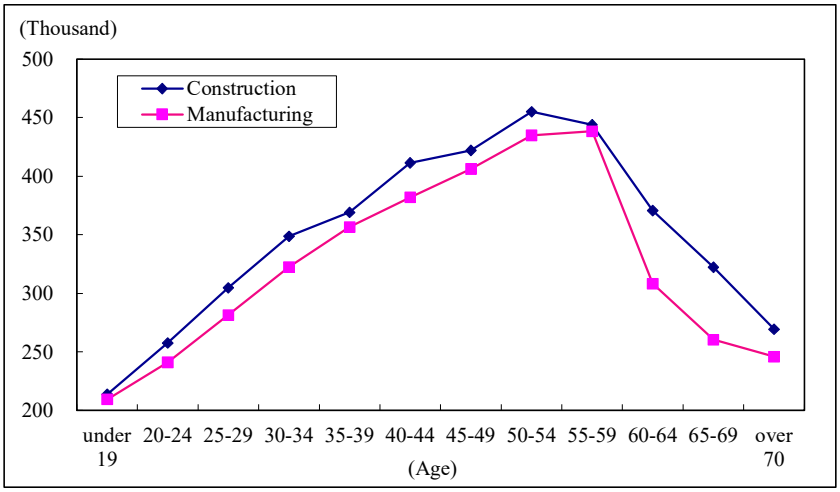
Figure.12 Trends in Total Annual Wages of Production employees



Source: Basic Survey of Wage Structures (Ministry of Health, Labor, and Welfare)
(Note) Total annual wages = fixed monthly salary × 12 (months) + annual bonus and other special pay

The average wage curve of construction employees in the below figure indicates that the annual wage at the age of 50 -54 shows the peak in the construction industry. This has been the issue because its generation has children's high educational expenses.

Figure.13 Annual Wage of Employees in Construction and Manufacturing



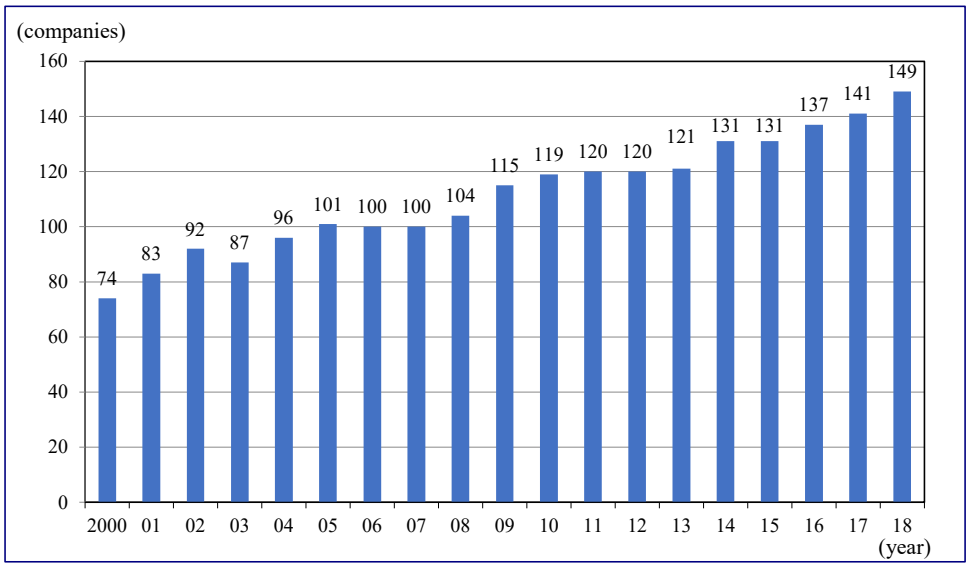
Source : Basic Survey of Wage Structures (Ministry of Health, Labor, and Welfare)
(Note) Total annual wages = fixed monthly salary × 12 (months) + annual bonus and other special pay

6. International Transactions in the Construction Market

(1) International Construction Companies in Japan

In the fiscal year 2018, there were 149 international construction companies holding construction licenses in Japan (foreign corporations and Japanese corporations with 50% or more foreign ownership). An increasing trend continues.

Figure .14 Number of International Construction Companies Holding Construction Licenses in Japan



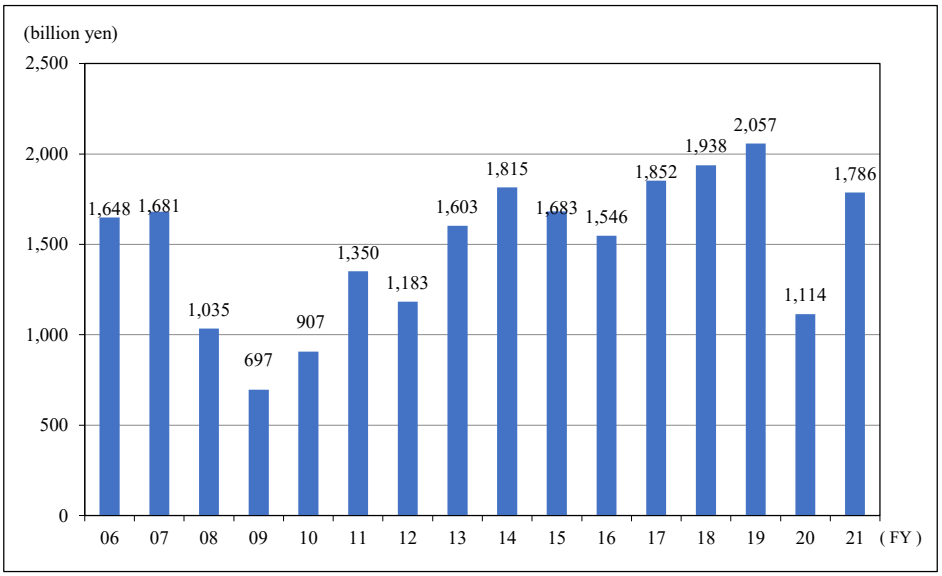
Source: Construction Handbook 2019 (Japan Federation of Construction Companies)

(2) Japanese Construction Companies in Foreign Countries

Japan's overseas construction orders exceeded 1 trillion yen for the first time in 1983, and have remained above 1 trillion yen for more than 20 years. In 2007, due to the impact of the global recession, the amount of orders received in 2009 fell to 1,681.3 billion yen. After that, it turned to a recovery trend, and although it decreased in 2020 due to the impact of the Covid-19, it recovers to 1,785.5 billion yen in FY2021.

The number of overseas construction orders received is not based on all of Japan's overseas construction orders, but based on overseas construction orders (10 million yen or more) received by 50 member companies of the Japan Association of Construction Contractors (OCAJI). It should also be noted that this figure does not include the performance of plant engineering companies.

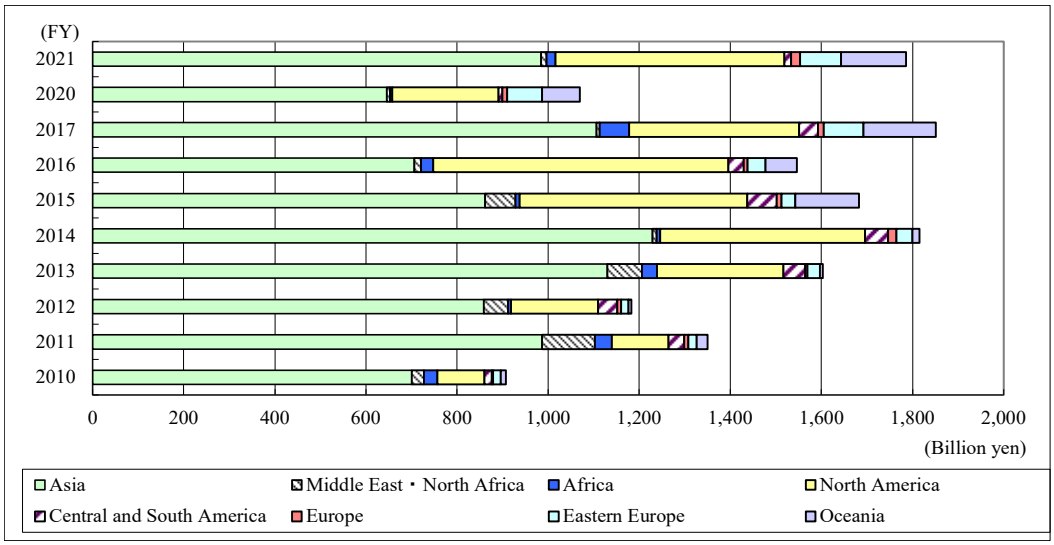
Figure. 15　Overseas Construction Orders with Japanese Companies



Source :　The Overseas Construction Association of Japan. Inc

Figure.16 shows order records by region.

Fig. 16　Overseas Construction Orders Received in 2010–2017 (by Region)

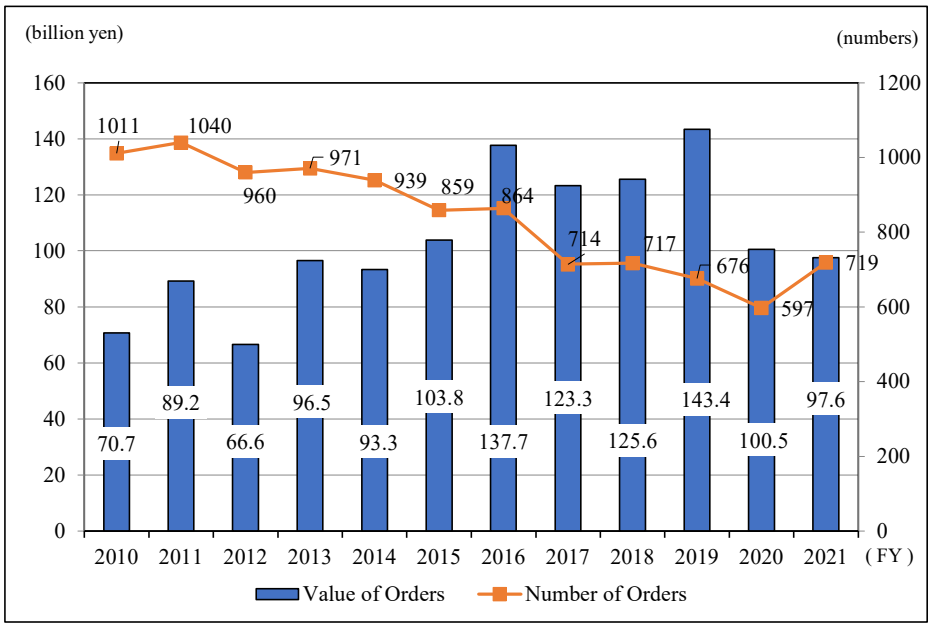


Source: The Overseas Construction Association of Japan. Inc

(3) Japanese Overseas Construction Consulting Companies

Looking at the overseas sales performance of construction consulting companies, the total amount of orders received in FY2021 was 97.6 billion yen, almost the same as the previous year, and the number of orders was 719 , an increase of 122 from the previous year. The simple average order value per project is about 135 million yen.

Figure. 17 Overseas Sales of Japanese Construction Consulting Companies



Source : Infrastructure Development Institute of Japan. Inc