



# Japan Country Insights and Commodity Report Q3 2022





# Japan

## Q3 2022

Japan's economic growth is expected to be relatively modest across both this year and next, at 1.58% and 1.35% respectively. In recent months, inflation rose to its fastest pace in over 30 years, similar to what is being seen around the world, with the Bank of Japan likely to revise its inflation forecast upwards for the current fiscal year in the face of a weakening yen, to 2.5%. FX rates are particularly influential at the moment, with the yen continuing to lose ground against the US dollar.

The construction industry is expected to grow by 2.5% in real terms this year. Q1 saw a relatively subdued performance, although investment in renewables and robust demand for Japanese exports is anticipated to support the industry throughout H2 2022. Slowing economic growth in China poses a particular downside risk for Japan, coupled with elevated material costs and escalating energy prices, which will somewhat dampen industry performance and investor sentiment for the foreseeable future.



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### Lumber

Japanese lumber prices are expected to continue to rise in the final quarter of this year, with Russia's halting of wood chip, logs and veneer sheet exports tightening available supply. With approximately 60% of Japan's lumber consumption met by imports, further upwards pressure on prices will be generated by the continued weakening of the Japanese yen and rising shipping rates. However, weaker private residential and non-residential investment will partially offset this upwards pressure.



### Cement and aggregates

Cement prices in Japan are expected to continue to rise through the second half of this year. Driving the increase in prices is a relatively substantial increase in manufacturing and import costs as a result of the weaker yen, higher energy rates and increased raw material prices. With the Bank of Japan not expected to transition away from its ultra-easy policy stance as recession risks loom, the weakness of the yen will exert upwards pressure on cement prices well into the first half of 2023. However, an additional stimulus plan, expected in the coming weeks, may soften cement price growth, with the government expected to announce measures to ease the rise of electricity prices.



### Concrete blocks and bricks

Brick and concrete block prices are expected to record marginal price growth in the final two quarters of this year. More costly manufacturing caused by higher energy prices and rising import costs due to the weak yen will be the key drivers of price growth in H2.



### Steel (rebar and structural)

Steel prices in Japan are expected to rise in the second half of this year, with Japan's steel producers seeking increases on contract prices to offset rising manufacturing and elevated raw material costs. While iron ore and coking coal prices have eased, the significant decline in the value of the yen has kept their relative import price high. Furthermore, rising energy prices have exerted additional upwards pressure on manufacturing costs. With the weakness of the yen making imports of cheaper foreign steel alternatives unviable, domestic manufacturers have significant pricing power and domestic consumers are likely to accommodate an increase in price demand.



### Copper

Copper prices have eased sharply from their Q1 2022 highs, with prices in Japan expected to have contracted by upwards of 13% in Q3 2022. Prices are expected to continue to fall in the final quarter of this year, with the slowing of industrial activity in the US and Europe, and soft public investment in H1 2022 in Japan weighing on demand. An increase in copper's relative cost, given its dollar denomination as the yen weakens, will further weigh on demand in Japan. In the longer term, copper prices are expected to increase significantly as investment in Japan's net and beyond-zero energy transitions accelerates.

# Japan - Commodity Report



Materials	Q4 2022 (f)	Q4 2021 – Q4 2022 (f)	Q2 2022 – Q3 2022 (e)	
	JPY	JPY	2021-22* % change	% change
<b>Copper</b> (JPY/MT)	1,118,159	1,151,944	-2.93% ↓	-13.4% ↓ ●
<b>Steel rebar</b> (JPY/MT)	117,943	93,633	25.96% ↑	0.3% ↑ ■
<b>Steel flat</b> (JPY/MT)	148,545	136,200	9.06% ↑	3.1% ↑ ●
<b>Lumber</b> (JPY/M3)	73,057	65,000	12.39% ↑	3.3% ↑ ●
<b>Asphalt</b> (JPY/MT)	123,388	91,000	35.59% ↑	17.5% ↑ ●
<b>Limestone</b> (JPY/MT)	90,968	91,667	-0.76% ↓	0% ↔ ■
<b>Cement</b> (JPY/MT)	13,849	10,800	28.24% ↑	4% ↑ ●
<b>Concrete</b> (JPY/M3)	15,352	14,700	4.44% ↑	0.9% ↑ ■
<b>Welded mesh</b> (JPY/unit (a))	664	590	12.55% ↑	0.3% ↑ ■
<b>Bricks</b> (JPY/000 unit)	130,723	117,000	11.73% ↑	1.4% ↑ ●
<b>Plasterboard</b> (JPY/unit (b))	1,548	1,462	5.86% ↑	0% ↔ ■
<b>Diesel</b> (JPY/litre)	151.74	146.72	3.42% ↑	-0.7% ↓ ■

(a) 100x200cm, dia.-5mm  
(b) 182x91x0.95cm (LxWxT)

● Q2 to Q3 2022 % change greater than estimation in our Q2 report  
■ Q2 to Q3 2022 % change less than estimation in our Q2 report

Material	% change Q3 – Q4 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
 <b>Copper</b>	-0.5% ↓	High	Global copper prices are expected to remain weak in the final two quarters of this year and into 2023. Downside risk to the price outlook is significant, with industrial production in Europe and the US slowing due to inflated energy costs, and a significant weakening of the Japanese yen against the US dollar increasing the cost of the dollar-denominated metal. Some upwards pressure on prices may be generated towards the end of the year as China's infrastructure drive begins to accelerate, but this is unlikely to offset the impact of the aforementioned risks.
 <b>Steel prices</b> - Steel rebar - Flat steel	+1.5% ↑ +1.5% ↑	Moderate	An increase in steel demand, as delayed civil engineering works commenced, helped to drive up prices in Q3 2022, with the volume of orders received by primary processors rising significantly. With raw material and energy costs rising, Japan's steel producers have begun to seek increases on contract prices with domestic customers to offset an increasingly costly manufacturing process. Price increases are likely to be accepted by domestic consumers, with the weak yen making imports of cheaper foreign alternatives more costly.
 <b>Lumber</b>	+1.0% ↑	Moderate	Lumber prices are estimated to have appreciated by approximately 3% on a quarterly basis in Q3 2022, predominantly due to a surge in demand and tight supply. Prices are forecasted to rise in the final quarter of this year, but this increase is expected to be far more marginal as the pressure on domestic supply chains eases. Heading into 2023, lumber prices are expected to remain relatively stable.
 <b>Asphalt</b>	+1.0% ↑	Moderate	The OPEC+ decision to cut production by two million barrels per day is expected to drive up crude oil and oil derivative prices and, as a result, the price of asphalt is expected to remain high.
 <b>Limestone</b>	+0.2% ↑	Low	Limestone prices are expected to remain relatively stable in the second half of this year, recording only a marginal increase in Q4 2022.

Please note that commodity prices are based on representative materials available in the respective countries, and as these materials may not be standard across all markets, cross-country comparisons on prices can be ineffective. For example, asphalt types can vary between hot, cold or a bitumen price, and standard unit sizes for materials can vary across countries.

# Japan - Commodity Report



## Raw construction materials price index 2021-2022

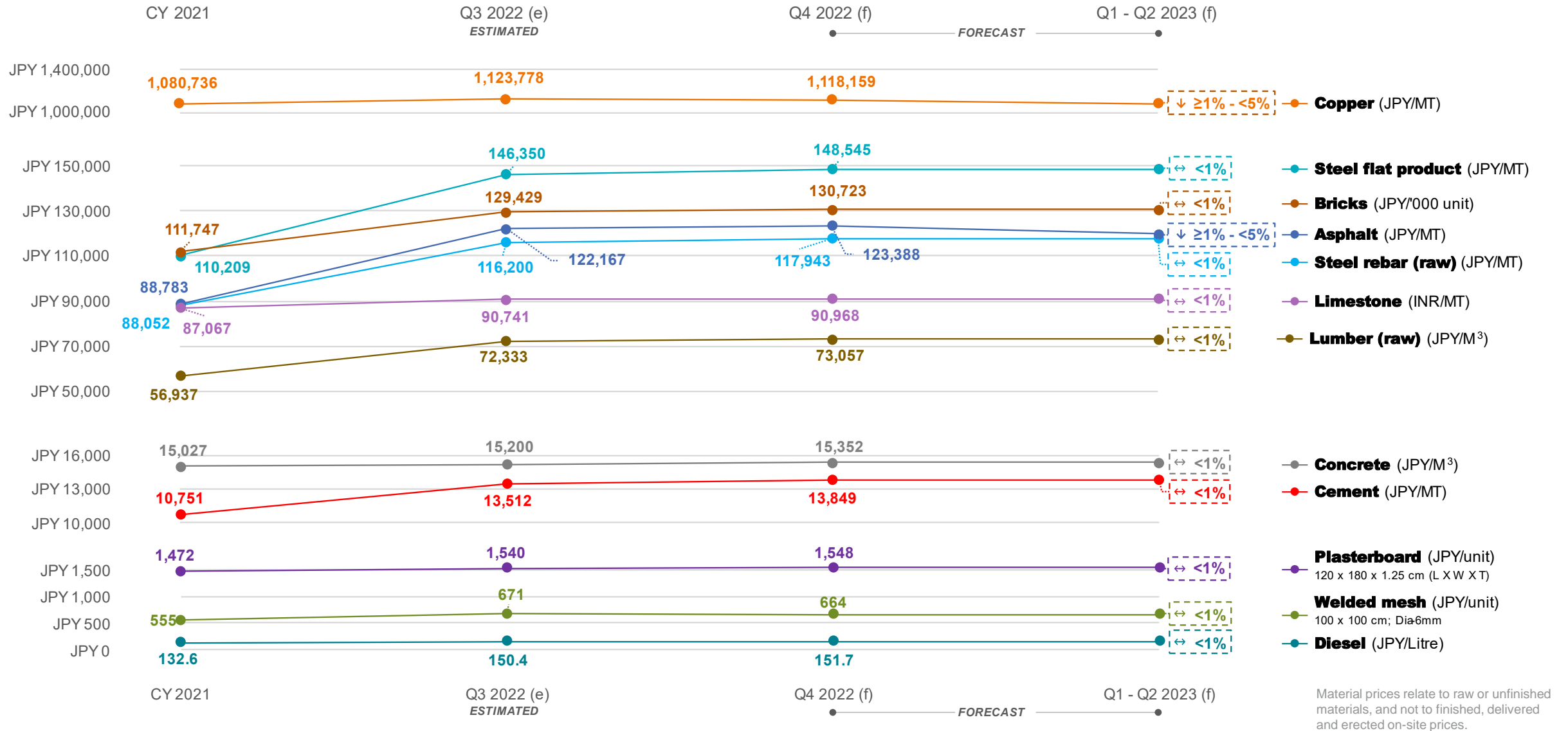
Apr-22	<b>105.8</b>
Mar-22	<b>104.9</b>
Feb-22	<b>104.9</b>
Jan-22	<b>104.9</b>
Dec-21	<b>104.9</b>
Nov-21	<b>104.9</b>
Oct-21	<b>104.9</b>
Sep-21	<b>104.9</b>
Aug-21	<b>104.9</b>
Jul-21	<b>104.7</b>
Jun-21	<b>104.7</b>
May-21	<b>104.7</b>
Apr-21	<b>104.6</b>
Mar-21	<b>104.5</b>
Feb-21	<b>104.5</b>
Jan-21	<b>104.1</b>

Material	% change Q3 – Q4 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
 <b>Cement Concrete</b>	+2.5% ↑ +1.0% ↑	Moderate	Cement prices are estimated to have increased by in excess of 3% on a quarterly basis in Q3 2022, predominantly due to an increase in manufacturing and import costs as energy and input prices rise, and the weakened yen. Major cement producers, such as Taiheiyo Cement, Sumitomo Osaka Cement and Tokuyama have all reported operational losses. These issues are expected to persist, and cement prices are forecasted to remain elevated into 2023 as a result. Due to the increase in cement prices, concrete prices are expected to rise in tandem.
 <b>Welded mesh</b>	-1.0% ↓	Moderate	Welded mesh prices depend primarily on the movement in the price of steel rebar. Due to this, welded mesh prices are estimated to have increased slightly in Q3 2022 but forecasted to moderate in Q4.
 <b>Bricks</b>	+1.0% ↑	Low	Brick prices are estimated to have increased marginally in Q3 2022, and a similarly marginal increase is forecasted for Q4. While manufacturing and import costs have risen substantially due to rising energy prices and a weaker yen, their impact has been partially offset by a continued slowing of private residential and non-residential investment.
 <b>Plasterboard</b>	+0.5% ↑	Low	Plasterboard prices are expected to have remained stable in Q3 2022 and will stay close to current levels into 2023.
 <b>Diesel</b>	+0.9% ↑	Moderate	While diesel prices moderated slightly in Q3 2022 as global crude oil prices softened, the agreed two million barrel per day cut in OPEC+ production is expected to see crude oil prices rally, driving up diesel prices in the final quarter of this year and into 2023. The increase in diesel prices will, however, be softened by government plans to extend its fuel subsidy into spring 2023.

\* Level of impact rating reflects a combination of factors: the price movement and also price level (compared to recent past beyond the last quarter), the importance of the material, and general state of the supply chain in terms of stability.

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# Japan - Construction Materials Pricing (2021-2022)



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# Japan – Macroeconomic overview



## Economic indicators



**1.58%**

GDP growth in 2022 (f) and **1.62%** in 2021



**2.17%**

inflation rate in 2022 (f) and **-0.23%** for 2021



**56.18M**

people employed in 2022 (f) and **56.24M** in 2021



**2.56%**

unemployment rate for 2022 (f) and **2.83%** in 2021



**107.5**

Consumer Price Index in 2022 (f) and **105.21** in 2021



**116.3**

Producer Price Index in Sept 2022 and **106.6** in Sept 2021

## National holidays



**16 public holidays**

in Japan each year.







- New Year's Day (1 January)
- Coming of Age Day (10 January)
- National Foundation Day (11 February)
- The Emperor's Birthday (23 February)
- Vernal Equinox Day (21 March)
- Shōwa Day (29 April)
- Constitution Memorial Day (3 May)
- Greenery Day (4 May)
- Children's Day (5 May)
- Marine Day (18 July)
- Mountain Day (11 August)
- Respect for the Aged Day (19 September)
- Autumnal Equinox Day (23 September)
- Health and Sports Day (10 October)
- Culture Day (3 November)
- Labour Thanksgiving Day (23 November)



# Japan – Macroeconomic overview



## Output 2021 and 2022 (in yen, millions)

Sectors	Total 2021	Total 2022 (f)	% change
Commercial 	10,369,379	10,879,302	4.9%
Energy and utilities 	14,916,435	14,773,013	-1%
Industrial 	6,291,782	6,440,493	2.4%
Infrastructure 	24,021,878	23,817,276	-0.9%
Institutional 	3,601,571	3,681,973	2.2%
Residential 	23,892,182	25,553,386	7%

## Long-lead equipment (LLE) and Supply Chain narrative

Long-lead equipment (LLE) lead times have changed drastically since the start of 2022. Suppliers have seen the implications of material shortages, delays and price hikes throughout the supply chain, which is leading to extended lead times and reduced commitment from suppliers for new projects. The key areas in focus are:

- Demand:** The demand for long-lead equipment in the data centre sector has continued to increase in Q3 2022. More data centre and crypto mining providers are joining the market, and this continued demand far outweighs the capacity of the supply chain. Entry onto the production line remains a significant challenge, with suppliers reporting fully booked capacity until Q2 2024. There has been some growth in the development of Tier 2 and Tier 3 suppliers to support this demand. However, it will take time to build an extended supply chain. There has also been no sign of a decline in demand yet in early Q4 2022.
- Material shortage:** Just as material availability started to improve, the further threat of escalation with the Russia-Ukraine conflict has cast further uncertainties of future material stocks and reserves. The supply chain has continued to seek alternative sources of raw materials, and although this has been with partial success, market lead times remain conservative.
- Freight durations and costs:** Heightened by the increase in fuel costs, and compounded by the instability of labour and container availability, freight durations have been particularly volatile in recent times. Early indications from Q4 2022 suggest some stabilization in shipping durations is returning to the market, but the associated costs remain volatile due to the global fuel crisis. As clients consider alternative solutions, it almost becomes cost prohibitive to use quicker forms of transport, such as air freight, due to these increasing fuel costs.

## Construction Health and Safety practices and culture



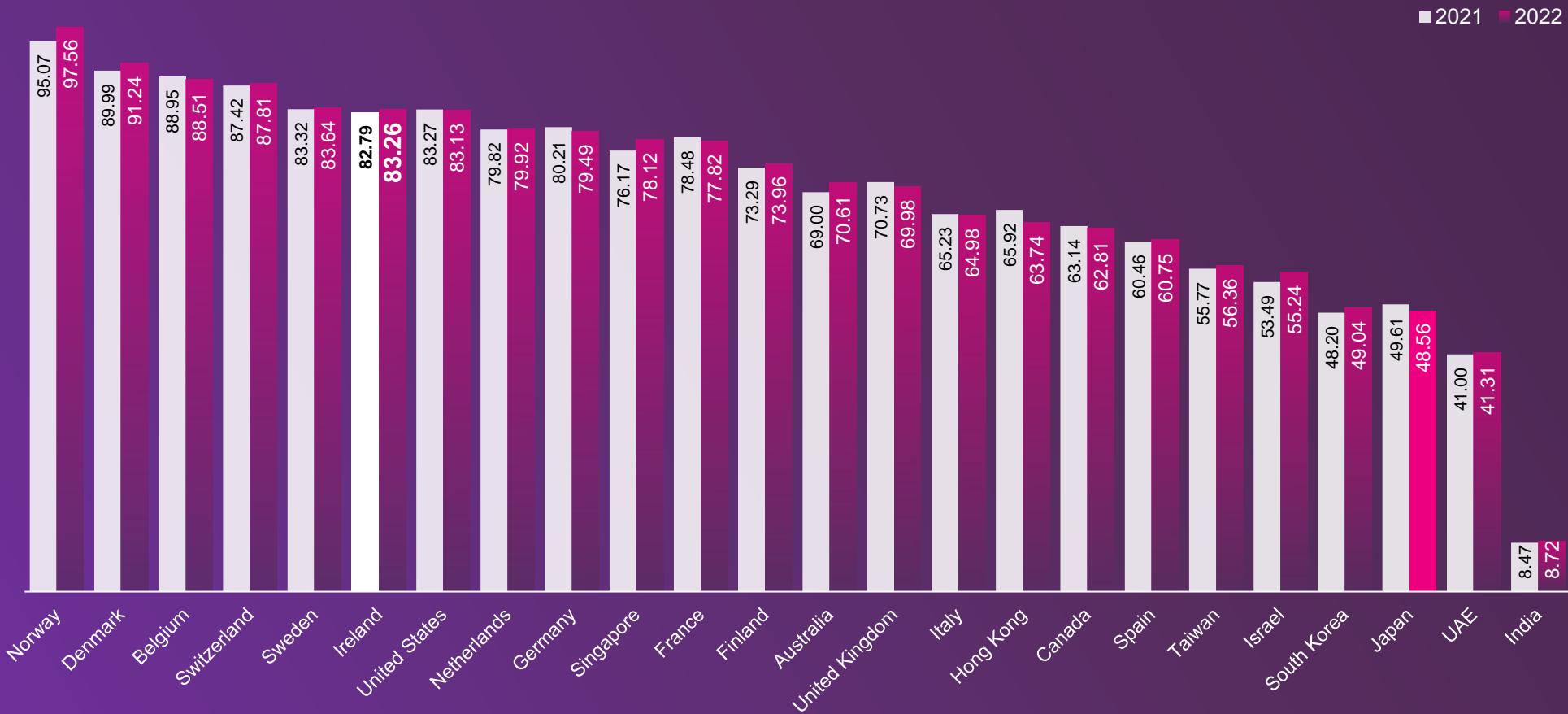
**288**

construction fatalities in 2021

# Japan – Macroeconomic overview



## Labour productivity



Labour productivity per hour worked in 2021 international dollars, converted using Purchasing Power Parities

## Labour costs



**JPY1,950**

is the average hourly earnings or

**JPY4,057,017**

average construction worker gross salary in Hong Kong.

An entry level construction worker (1-3 years of experience) earns an average salary of **JPY3,016,692**. A senior level construction worker (8+ years of experience) earns an average salary of **JPY4,912,428**.



# Japan - Report methodology



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Linesight has commissioned independent global research to track construction materials and commodity prices. The approach and methodology for the collection of construction material pricing and other indicators is based on primary and secondary research.

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## Primary and secondary research

Primary research is conducted on a quarterly basis with stakeholders in the value chain, including manufacturers and suppliers/distributors of the target materials, to ascertain market information on prices in recent quarters, and also on projections for changes in the coming quarter and remainder of the year. The market analysis also involves a thorough assessment of secondary sources of data on materials and labour prices, in addition to underlying demand and supply trends that will impact market prices.

Sources include GlobalData's Construction Intelligence Center (CIC), the World Bank, IMF, OECD, as well as country specific national statistics offices, such as the U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, and also industry specific associations and publications. A more comprehensive list of sources is included below.

## Definitions

- Commodity prices are net of taxes for all the countries
- Prices are not customer delivered
- All commodities are raw materials
- Nominal and real data

Nominal data series do not exclude changes in prices and are also referred to as current prices series.

Annual changes in nominal data for construction output will include changes in construction activity, as well as changes in costs for materials and equipment.

Real data series are calculated by keeping prices constant (so, are also referred to as constant price series), and therefore, they reflect changes in activity only. Growth rates in nominal terms can overstate the pace of growth in construction activity if there is high inflation stemming from rising prices for key inputs.

## Sample sources – Japan

For Japan, sources for this report include, but are not limited to:

- IMF
- Japan Industrial Safety and Health Association
- Statistics Bureau of Japan
- GlobalData's Construction Intelligence Center (CIC)

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