Linesight

Norway

Country Insights and Commodity Report

Q1 2022

Norway
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Following a small contraction in 2020, Norway's economy rebounded by 3% in 2021, supported by healthy private consumption and government investment. The IMF forecast 4.1% growth for this year, although this was prior to the Russia-Ukraine conflict, which will undoubtedly impact the outlook.

Construction contracted by 3.3% in 2020, but returned to growth of 2.4% last year and further growth circa 2.1% is expected this year. The government has committed to developing national infrastructure, which will support growth, as well as energy resources – renewables, in particular. Growth in the near-term is likely to be constrained by current market dynamics, as material prices return to volatility and supply chain challenges remain.

As material costs will continue to represent a challenge for the construction industry for the foreseeable future, Linesight will publish quarterly updates to track commodities and provide insights about future projections on movements.

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Lumber
Lumber prices eased in late 2021 but amid higher demand domestically and rising prices internationally, there has since been renewed upward pressure on prices in Norway. There is still very high demand for wood-based building materials both in Norway and internationally. According to Treindustrien's CEO, Heidi Finstad, there are major disruptions in several value chains as a result of a shortage of raw materials, a lack of transport capacity and a dramatic increase in fuel and energy costs, but there are investments in Norway's wood industry to increase production capacity.

Concrete and aggregates
HeidelbergCement's Norcem is the sole producer of cement in Norway, with plants in Brevik and Kjøpsvik and a wide distribution network of depots along the coast. Efforts to capture carbon emissions from Norcem cement factory is running behind schedule and is proving more costly than expected.

Concrete blocks and bricks
Brick prices have trended upwards in recent quarters, and given high production costs stemming from rising energy costs, prices will stay at relatively high levels.

Steel (rebar and structural)
Steel prices remain high and new restrictions on the import of Russian steel products will greatly impact supply, keeping prices at elevated levels. The government's focus on developing transport infrastructure will bolster demand. Under the new National Transport Plan 2022–2033, the government increased its allocation for railway infrastructure by 23.2%.

Copper
The price of copper in Norway had been easing following a recent high in October 2021, and there was an expectation that an increase in supply would contribute to a continuation of this trend. However, prices spiked again in early March as a market response to the onset of the Russia-Ukraine conflict. Copper prices will remain at elevated levels and the outlook is uncertain given the continued disruption to supplies. Demand for copper will remain high, reflecting investments in renewable energy and electric vehicles. Norway is planning development of a new copper mine, with all mining equipment to run on renewable energy, according to Nussir ASA. However, environmentalists and indigenous rights activists have sought to block the construction work.

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Norway - Commodity Report

Materials	Q4 2021 NOK	Q3 Q4 2022 (f) NOK	Q3 Q4 2022 (f) 2021-22 (f) % change	Q4 - Q1 (e) 2022 % change
Copper (NOK/MT)	84,661	93,730	10.7% ↑	4% ↑
Steel rebar (NOK/MT)	7,924	8,814	11.2% ↑	6% ↑
Steel flat (NOK/MT)	9,896	10,089	1.9% ↑	-3% ↓
Lumber (NOK/M3)	568	548.7	-3.4% ↓	-8% ↓
Asphalt (NOK/MT)	901	1,018	13.0% ↑	8% ↑
Limestone (NOK/MT)	467.8	499.3	6.8% ↑	3% ↑
Cement (NOK/MT)	3,618	4,072	12.6% ↑	7% ↑
Concrete (NOK/M3)	1,384	1,554	12.2% ↑	7% ↑
Welded mesh (NOK/unit)	154	176	13.8% ↑	6% ↑
Bricks (NOK/'000 unit)	8,732	9,825	12.5% ↑	8% ↑
Plasterboard (NOK/unit)	114	137.2	20.4% ↑	15% ↑
Diesel (NOK/litre)	16.73	19.84	18.6% ↑	13% ↑

Q4 2021: Average **Q3 Q4 2022 (f):** Forecasted average
2021-22 % change: % change from Q4 2021 to Q3 Q4 2022 average

Material	% change Q1 – Q2 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
Copper	+3% ↑	High	As mentioned previously, the price of copper had been easing following October 2021's high, and there was an expectation that an increase in supply would contribute to a continuation of this trend. However, as the Russia-Ukraine conflict broke out, prices spiked again. It is expected to remain elevated, but the outlook is uncertain given the continued disruption to supplies and a possible weakening in demand in China, which follows the recent COVID-19 lockdowns imposed in major cities.
Steel prices - Steel rebar - Flat steel	 +2% ↑ +2% ↑	High	New restrictions on the import of Russian steel products will greatly lower steel supplies, keeping prices at high levels domestically.
Cement **Concrete**	+1.9% ↑ +1.5% ↑	Low	Due to increase in energy prices along with a recovery in buildings construction, prices for concrete and cement will continue to edge upwards. Furthermore, higher fuel prices will contribute additional price pressure for concrete deliveries.
Asphalt	+1.5% ↑	High	Growing demand for construction materials, arising from increased construction output combined with a rise in international crude oil prices, will continue to place upward pressure on asphalt prices.
Limestone	+1% ↑	Low	Limestone prices have been relatively stable, but higher energy costs will contribute to some upwards pressure.
Lumber	+1.5% ↑	Moderate	Wooden housing is popular in Norway, and the rise in residential construction along with higher costs for transportation will contribute to an upward trend in lumber prices in the coming quarters.

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.

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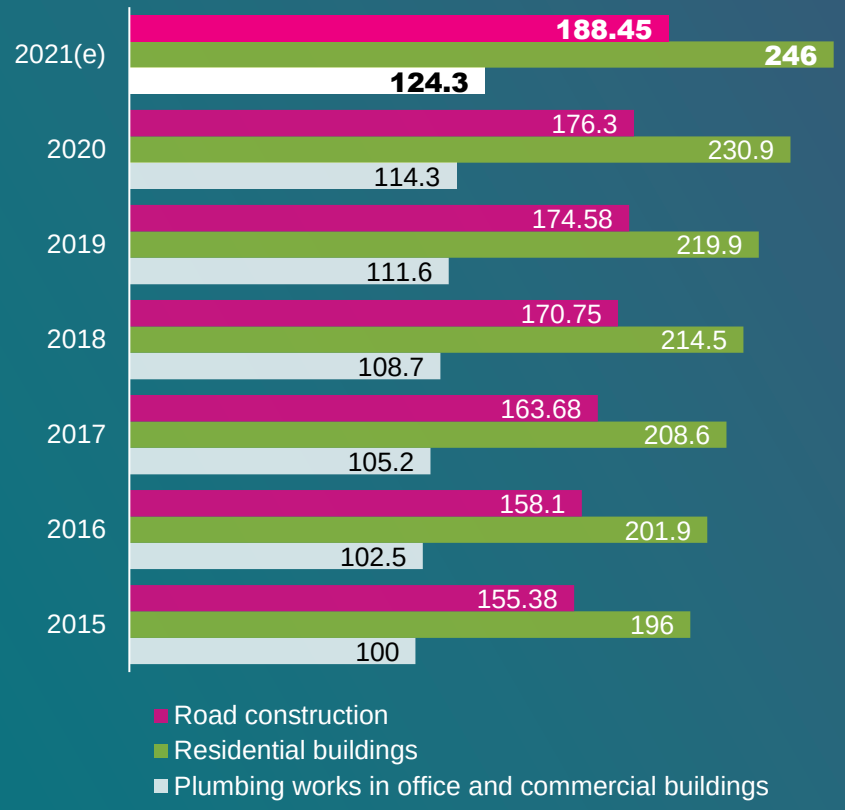
Norway - Commodity Report

Construction cost index



Knoema World Data Atlas

Index of economic freedom **73.4 out of 100**

Material	% change Q1 – Q2 2022 (f)	Level of impact of pricing on construction procurement and supply chain *	
Welded mesh	+4% ↑	High	The price of wired mesh will continue on an upwards trend in 2022 reflecting the expecting changes in steel prices.
Bricks	+1% ↑	Low	The rising fuel and energy cost is expected to push up production costs, while higher demand amid the recovery in construction output will tighten the demand-supply balance.
Plasterboard	+1.5% ↑	Low	As with other key building materials, the price of plasterboard is expected to remain at high levels given ongoing recovery in building construction.
Diesel	+1.5% ↑	High	Global oil prices will remain volatile in the coming quarters, but at a relatively high level, thus contributing to continued high prices for diesel.

* 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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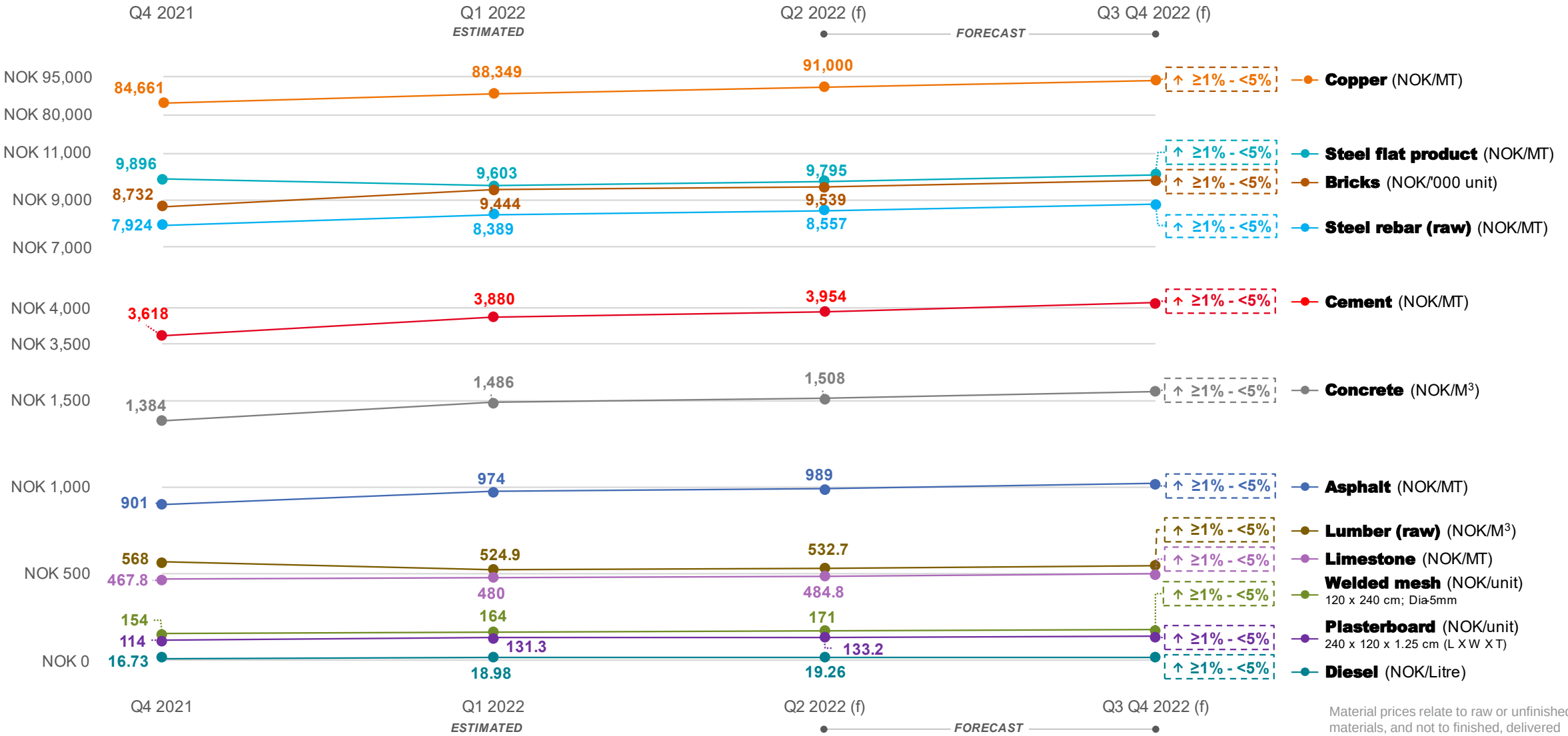
Norway - Construction Materials Pricing (2021-2022)



Material prices relate to raw or unfinished materials, and not to finished, delivered and erected on-site prices.

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Norway - Macroeconomic overview

Economic indicators

4.07%
GDP growth in 2022 (f) and 3.03% in 2021

2% inflation rate in 2022 (f), and **2.6%** for 2021

2.76M people employed in 2022 (f) and 2.73M in 2021

4% unemployment rate in 2022 (f) and 4.3% in 2021

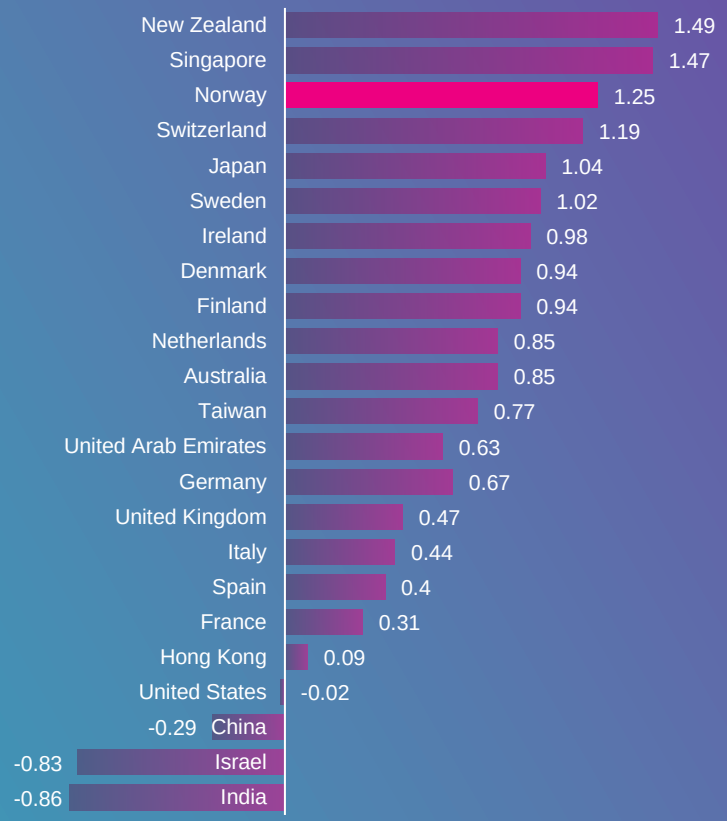
119.1 Consumer Price Index in 2022 (f) and 118.8 in 2021

Weather conditions

-12°C to 26°C
typical temperature range throughout the year

500mm – 3,000mm
range of average annual rainfall

Political stability



Political stability index (-2.5 weak; 2.5 strong)

The index of Political Stability and Absence of Violence/ Terrorism measures perceptions of the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.

National holidays

12 public holidays in Norway.
Most holidays are taken during December, typically around the festive period – ten days (from 23rd December until 3rd January)

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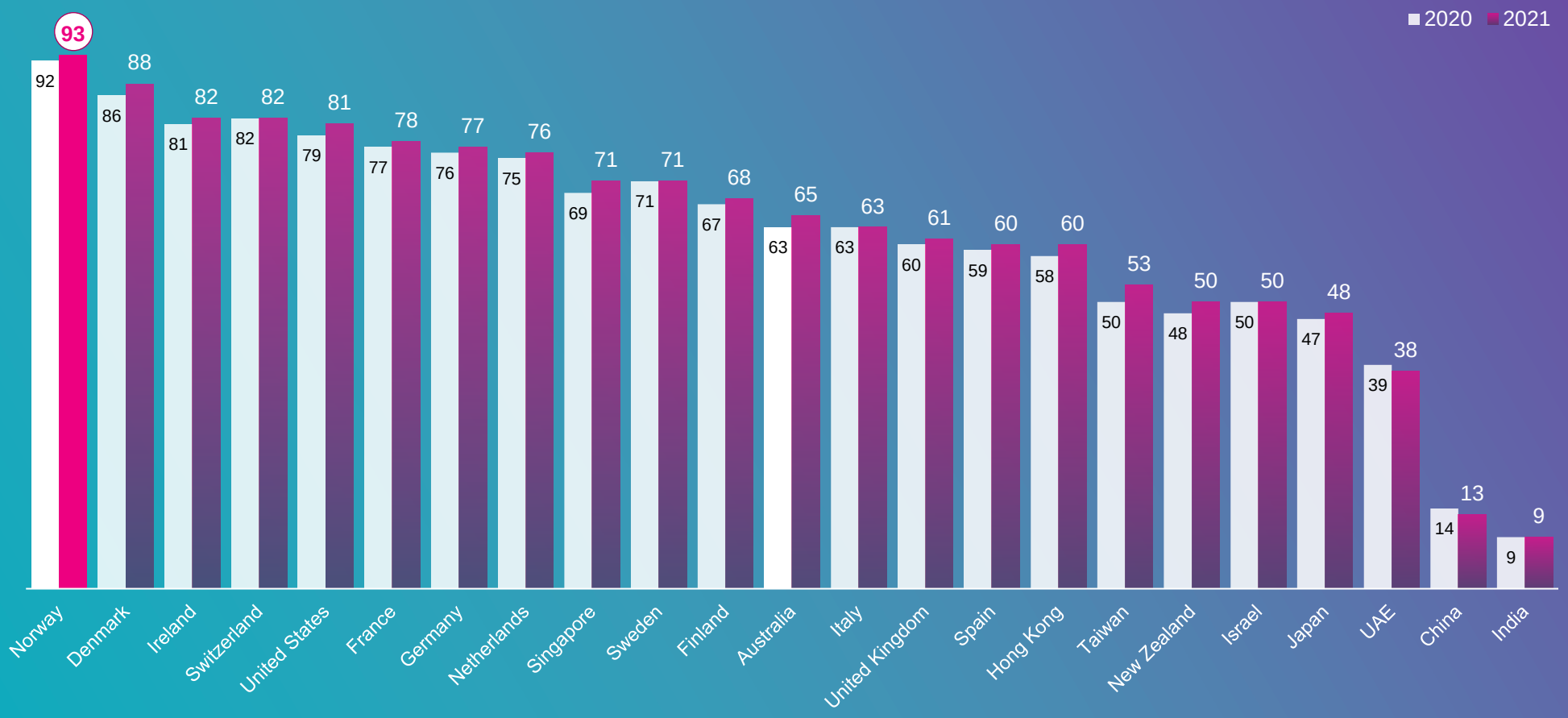
Norway - Macroeconomic overview

Labour productivity



Labour costs

NOK 494,634

average construction worker gross salary in Norway or an equivalent hourly rate of NOK 238

- An entry level construction worker (1-3 years of experience) earns an average salary of NOK 368,344.
- A senior level construction worker (8+ years of experience) earns an average salary of NOK 599,817.

Labour productivity per hour worked in 2020 international dollars, converted using Purchasing Power Parities

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Norway - Construction overview

Output 2021 & 2022 (f) (in millions)

Sector	Total 2021	Total 2022(f)	% change
Commercial	NOK 131,662.56	NOK 132,515.60	0.6%
Energy and utilities	NOK 41,068.25	NOK 42,314.18	3%
Industrial	NOK 22,636.69	NOK 22,685.13	0.2%
Infrastructure	NOK 154,095.63	NOK 160,267.89	4%
Institutional	NOK 35,262.86	NOK 35,741.86	1.4%
Residential	NOK 275,509.96	NOK 276,620.45	0.4%
Total output	**NOK 660,235.95**	**NOK 670,146.01**	**1.5%**

Long-lead equipment (LLE) – time risks

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:

1. **Demand**: The demand for long-lead equipment in the data centre sector has increased exponentially with the IT boom. More data centre and crypto mining providers are joining the market, and this new demand far outweighs the capacity of the supply chain. Entry onto the production line has become a significant challenge, with suppliers reporting fully booked capacity until Q1 2023. Opportunities exist for the development of Tier 2 and Tier 3 suppliers to Tier 1 status. However, it will take time to develop an extended supply chain.
2. **Material shortage**: The end of Q1 2022 saw a significant drop in the availability of raw materials used for LLE production. Global factors such as the Russia-Ukraine conflict and the resurgence of COVID-19 has halted production, which is at its lowest levels in recent years. The ethical approach in the supply chain to manoeuvre away from the use of Russian gas and oil has reduced production levels and added longer lead times within the supply chain. The raw material shortages are expected to continue into Q2 2022, whilst there is uncertainty for the security of the supply chain.
3. **Freight durations and costs**: Heightened by the increase in fuel costs and compounded by the shortage of labour and low supply of shipping containers, freight durations have soared as suppliers look for ways to mitigate these challenges. The demand for freight services has grown across all markets in recent years and the competition amongst industries has had a negative effect on availability and durations. As clients consider alternative solutions, it almost becomes cost prohibitive to use quicker forms of transport, such as air freight, due to increasing fuel costs.

Construction health & safety practices and culture

The Norwegian Labour Inspection Authority is a government agency, supervising organisations to ensure that they comply with the requirements of the Working Environment Act.

1,498
construction accidents reported in 2020, with an average of 4.9 accidents per 1,000 employees.

Norway - Report methodology

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.

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 – Norway

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

- IMF
- Economy.com
- The Global Economy
- Weather Spark
- Statistics Norway
- GlobalData's Construction Intelligence Center (CIC)
- Conference-board.org

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