

Monthly Survey of Manufacturing, March 2022

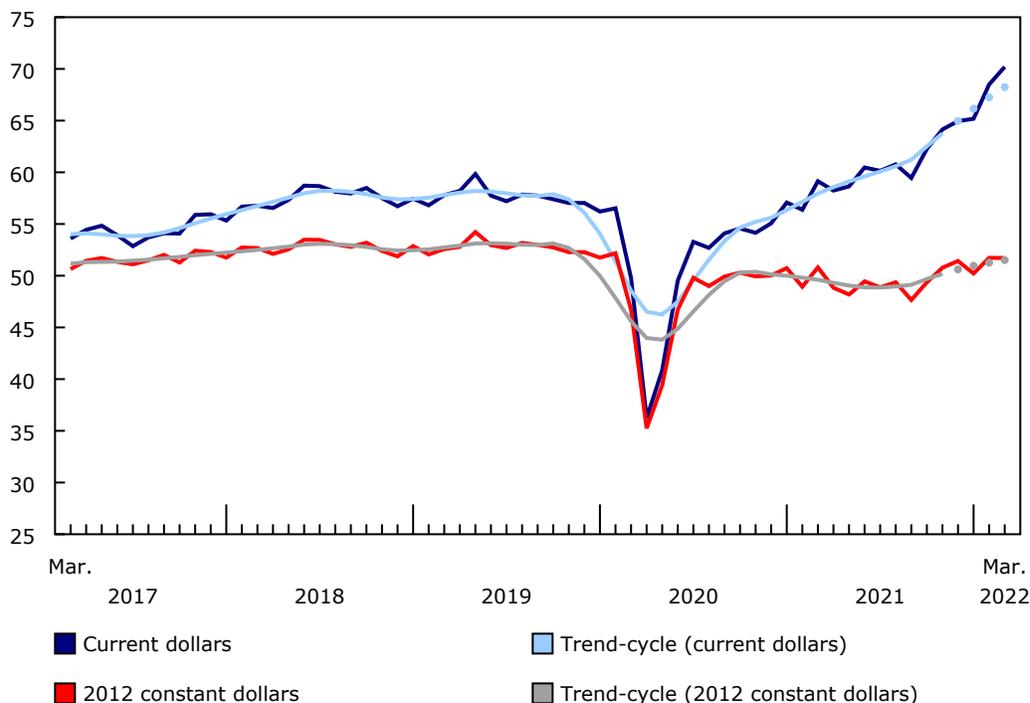
Released at 8:30 a.m. Eastern time in *The Daily*, Monday, May 16, 2022

Manufacturing sales rose 2.5% to \$70.2 billion in March, the sixth consecutive monthly increase. Sales rose in 16 of 21 industries, led by the petroleum and coal (+9.1%), primary metal (+6.5%), paper (+9.3%), and chemical (+3.3%) product industries. Meanwhile, the machinery industry posted the largest decline (-4.9%).

On a quarterly basis, sales rose 6.5% in the first quarter of 2022, the seventh consecutive quarterly gain and the largest increase since the third quarter of 2020.

Chart 1
Manufacturing sales

billions of dollars



Note(s): Data are seasonally adjusted. The higher variability associated with the trend-cycle estimates is indicated with a dotted line on the chart for the current reference month and the three previous months. For more information, see the Note to readers.

Source(s): Tables 16-10-0047-01 and 16-10-0013-01.

Sales in constant dollars were unchanged in March, indicating that the entire increase in current dollar sales was driven by higher prices as the [Industrial Product Price Index](#) rose 4.0%. Quarterly sales in volume terms increased 1.4% in the first quarter of 2022.

Petroleum sales continue to increase on higher prices

Sales in the petroleum and coal product industry increased 9.1% in March, entirely on higher prices as volumes sold declined 1.0%. Sales of petroleum and coal product rose 19.0% in the first quarter of 2022 compared with the fourth quarter of 2021. Higher demand due to the easing of COVID-19 restrictions as well as the uncertainty over



energy supply due to the Russian invasion of Ukraine were responsible for the recent increase in prices of petroleum products. In March, prices of refined petroleum energy products (including liquid biofuels) rose 18.8%, while [exports of refined energy products](#) increased 25.9%.

Sales of primary metals reached a new record high, rising 6.5% to \$5.8 billion in March. All primary metal industries posted higher sales, led by the alumina and aluminum production and processing (+47.9%) and iron and steel mills and ferro-alloy (+21.8%) industries. The gains were driven by higher prices of unwrought aluminum and aluminum alloys (+8.3%) and hot-rolled iron or steel products (+7.6%). The tight global supply of primary metals due to stricter measures in China related to the COVID-19 pandemic and sanctions against Russia due to its aggression in Ukraine led to increases in prices of many primary metals. Despite the month-over-month sales increase, sales on a quarterly basis were down 0.6% in the first quarter of 2022. Sales in real terms edged down 0.2% in March.

Following a 2.1% decline in February, paper product sales increased 9.3% to \$2.7 billion in March on higher prices and volume sold. In real terms, sales were up 6.7% in March. Some paper manufacturers were able to ship their products in March following several delays due to port congestion. Year over year, sales of paper products rose 14.9% in March, while on a quarterly basis sales increased 1.3% in the first quarter of 2022.

Sales also increased in the chemical (+3.3%), motor vehicle (+4.7%) and motor vehicle parts (+6.4%) industries in March.

Sales in the machinery industry decreased the most, falling 4.9% to \$3.6 billion in March following five consecutive month-over-month increases. Despite the decline, sales were 6.9% higher on a year-over-year basis in March and rose 3.4% in the first quarter of 2022.

Sales of other transportation equipment fell 41.0% to \$227.8 million in March. The decline was attributed to seasonal changes in the production of recreational transportation equipment. Despite the decrease in March, sales in the other transportation equipment industry rose 15.9% in the first quarter of 2022.

Production of aerospace products and parts (-8.6%) and sales of food products (-0.6%) were also down in March.

Sales increase in all provinces, led by Ontario

Manufacturing sales increased in all provinces in March, led by Ontario, Alberta and Saskatchewan.

In Ontario, sales rose 2.4% to \$30.1 billion in March following a 6.6% gain in February. Sales increased in 12 of 21 industries in March and were largest in the petroleum and coal (+10.3%), motor vehicle (+5.2%), and motor vehicle part (+6.8%) industries. Despite the ongoing global shortage of semiconductor parts, sales of motor vehicles in Ontario increased to their highest level since November 2020. Meanwhile, exports of motor vehicles and parts rose by 7.9% in March. On a quarterly basis, motor vehicle sales rose 6.9% in the first quarter of 2022, the third consecutive gain and the highest level since the fourth quarter of 2020.

In Alberta, sales rose 4.1% to \$8.8 billion in March, the sixth consecutive monthly increase, primarily on higher sales of petroleum and coal product (+11.4%) and fabricated metals (+24.7%). The gains were partially offset by a 17.9% decline in sales of machinery.

Sales in Saskatchewan rose 11.1% to \$2.2 billion in March, mainly on higher sales of chemicals, petroleum and coal product and primary metals industries. The gain in the chemical industry was driven by record high sales of pesticide and fertilizers. On a quarterly basis, total sales in Saskatchewan rose 9.4% in the first quarter of 2022.

Sales increase in all selected census metropolitan areas except Winnipeg

Starting with the release of manufacturing data for March, Statistics Canada now produces sales estimates for 3 new census metropolitan areas (CMAs)—Sherbrooke, Kitchener–Cambridge–Waterloo, and Windsor—along with estimates for the 12 CMAs for which estimates were already being produced prior to this release. Manufacturing sales on an unadjusted and seasonally adjusted basis have been compiled from January 2018 to March 2022 and are available in table 16-10-0011-01.

Manufacturing sales increased in 14 of the 15 CMAs in March, led by Edmonton, Québec, and Toronto. Only Winnipeg posted a decline.

Sales in Edmonton increased 9.2% to \$4.4 billion in March, the sixth consecutive month-over-month increase. The gain in March was almost entirely due to higher sales of petroleum and coal product (+16.0%).

In Québec, sales increased 16.9% to \$2.2 billion in March mainly on higher sales in the petroleum and coal industry. Year over year, sales in Québec were up 47.2% compared with March 2021.

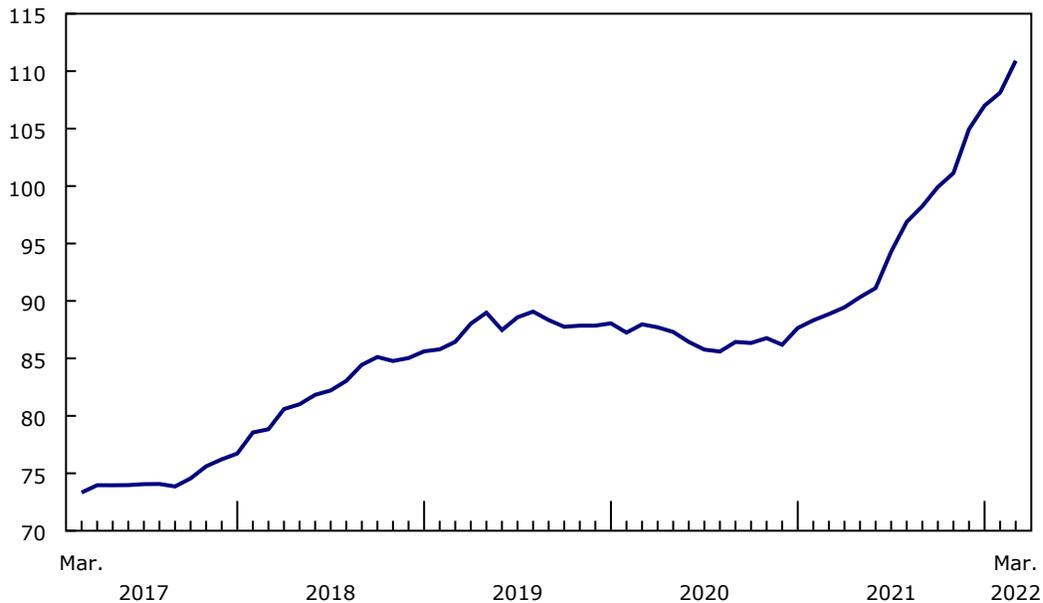
Sales in Toronto rose 2.5% to \$11.7 billion in March, following a 6.4% increase in February on higher sales in 15 of 21 industries led by fabricated metals (+10.0%), petroleum and coal product (+30.6%), and food products (+2.1%). Year over year, total sales in Toronto rose 18.9% in March.

Record-high inventory levels continue

Total inventory levels marked another increase, rising 2.6% to \$110.9 billion in March, on higher inventories of the primary metals (+6.8%), petroleum and coal product (+7.7%), and food (+4.3%) industries. The gains were driven by a higher value of raw materials which have been trending upward since January 2021 due to the supply chain disruptions and due to the Russian invasion of Ukraine. In March, total raw material inventories rose 2.8% from February, and were up 30.2% year over year.

Chart 2 Inventory levels rise

billions of dollars

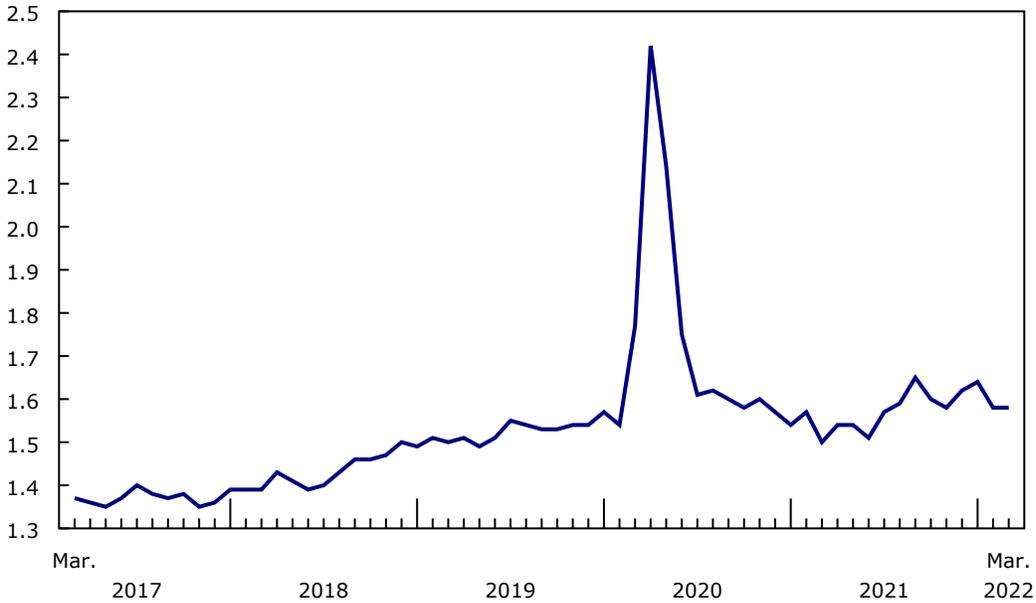


Note(s): Data are seasonally adjusted.
Source(s): Table 16-10-0047-01.

The inventory-to-sales ratio was unchanged at 1.58 in March. This ratio measures the time, in months, that would be required to exhaust inventories if sales were to remain at their current level.

Chart 3 The inventory-to-sales ratio is unchanged

ratio



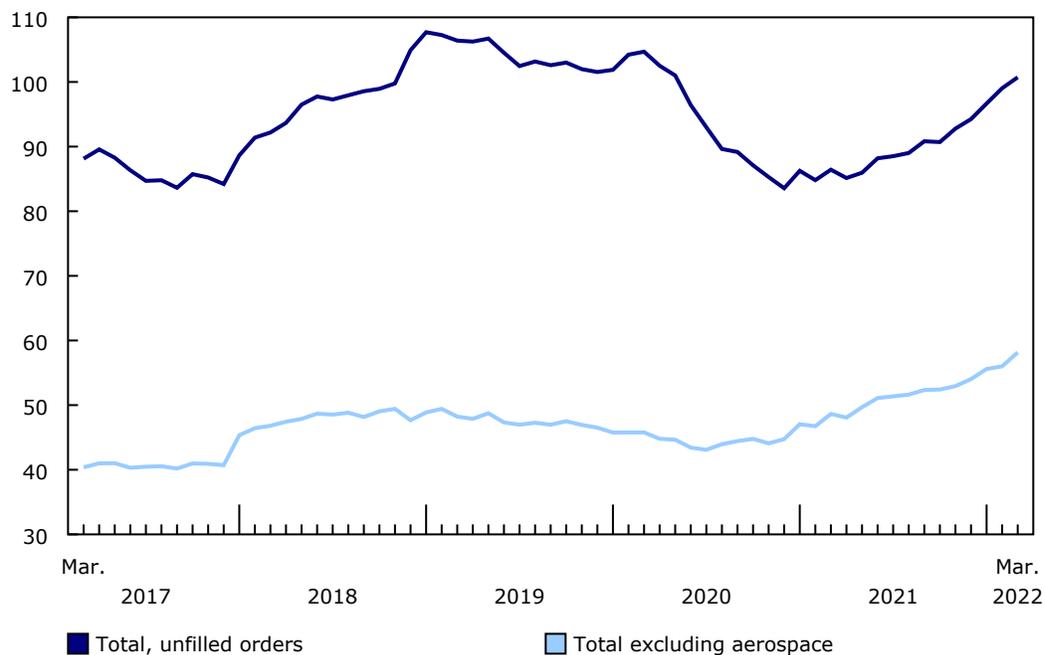
Note(s): Data are seasonally adjusted.
Source(s): Table [16-10-0047-01](#).

Unfilled orders rise

The total value of unfilled orders rose 1.7% to \$100.7 billion in March, the highest level since May 2020, on higher unfilled orders in the ship and boat building (+59.6%) and computer and electronic products (+9.8%) industries. The gains were partially offset by a 1.1% decline in unfilled orders of aerospace products and parts.

Chart 4 Unfilled orders rise

billions of dollars



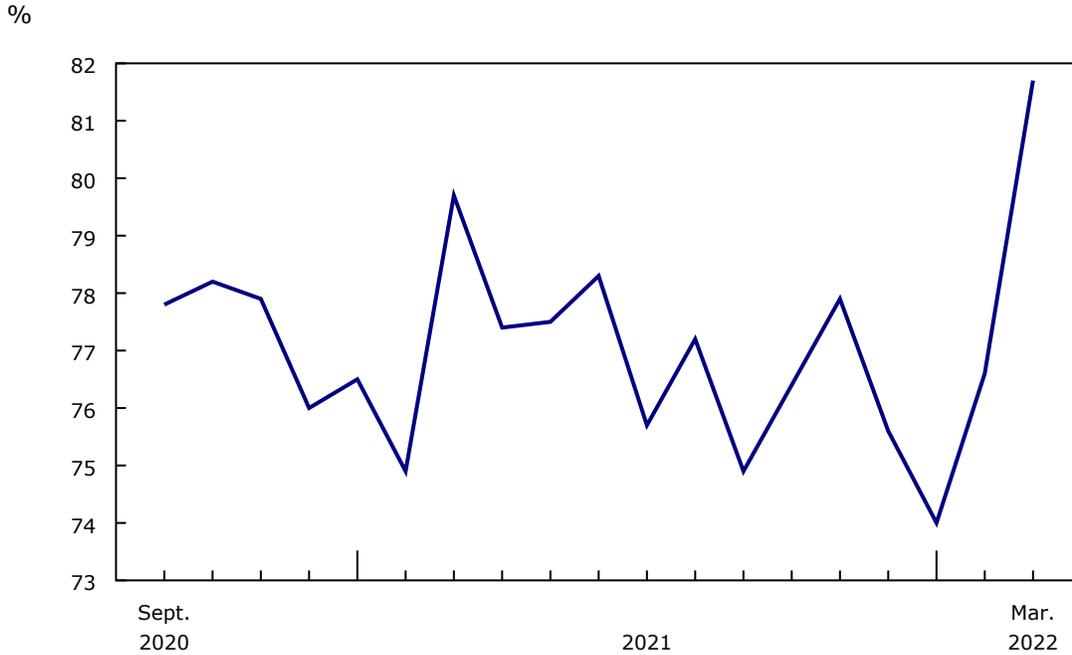
Note(s): Data are seasonally adjusted.
Source(s): Table 16-10-0047-01.

The total value of new orders reached a new record high, rising 1.4% to \$71.9 billion in March, driven mostly by higher new orders of ship and boat building, computer and electronics product, and petroleum and coal product industries.

Capacity utilization rate increases on higher production

The capacity utilization rate (not seasonally adjusted) for the total manufacturing sector increased from 76.6% in February to 81.7% in March, the highest rate since May 2019.

Chart 5
The capacity utilization rate increases



Note(s): Data are not seasonally adjusted.
Source(s): Table [16-10-0012-01](#).

The capacity utilization rates increased in all 21 industries in March, but were more pronounced in the transportation equipment (+10.4 percentage points), food (+5.3 percentage points), paper (+5.5 percentage points) and beverage and tobacco (+7.2 percentage points) product industries. Higher production of motor vehicle and motor vehicle parts were responsible for the increase in capacity utilization of the transportation equipment industry.

Table 1
Manufacturing: Principal statistics – Seasonally adjusted

	March 2021	February 2022 ^r	March 2022 ^p	February to March 2022	March 2021 to March 2022
	millions of dollars			% change ¹	
Manufacturing sales (current dollars)	59,140	68,494	70,196	2.5	18.7
Manufacturing sales (2012 constant dollars)	50,803	51,730	51,711	-0.0	1.8
Manufacturing sales (current dollars) excluding motor vehicles, parts and accessories	53,390	62,141	63,503	2.2	18.9
Inventories	88,855	108,128	110,903	2.6	24.8
Unfilled orders	86,426	99,028	100,724	1.7	16.5
New orders	60,759 ^E	70,866 ^E	71,892 ^E	1.4	18.3
Inventory-to-sales ratio ²	1.50	1.58	1.58

^r revised

^p preliminary

... not applicable

^E use with caution

1. Percent change calculated at thousands of dollars for current dollars and millions of dollars for constant dollars.

2. The inventory-to-sales ratio measures the time in months that it would take to exhaust inventories if sales were to remain at the current rate.

Source(s): Tables [16-10-0047-01](#) and [16-10-0013-01](#).

Table 2
Manufacturing sales by industry – Seasonally adjusted

	March 2021	February 2022 ^r	March 2022 ^p	February to March 2022	March 2021 to March 2022
	millions of dollars			% change ¹	
Food manufacturing	10,140	11,763	11,698	-0.6	15.4
Beverage and tobacco product	1,404	1,412	1,444	2.2	2.9
Textile mills	138	148	158	7.1	14.4
Textile product mills	123	146	152	4.7	23.4
Clothing manufacturing	189	239	247	3.5	30.9
Leather and allied product	31	32	34	5.1	9.1
Wood product	4,525	4,548	4,647	2.2	2.7
Paper manufacturing	2,345	2,465	2,694	9.3	14.9
Printing and related support activities	659	710	734	3.4	11.5
Petroleum and coal product	5,694	8,712	9,508	9.1	67.0
Chemical	4,983	5,576	5,761	3.3	15.6
Plastics and rubber products	2,889	3,526	3,525	-0.0	22.0
Non-metallic mineral product	1,525	1,712	1,756	2.6	15.2
Primary metal	4,906	5,488	5,843	6.5	19.1
Fabricated metal product	3,455	4,209	4,295	2.0	24.3
Machinery	3,348	3,763	3,580	-4.9	6.9
Computer and electronic product	1,315	1,273	1,359	6.8	3.3
Electrical equipment, appliance and component	900	1,092	1,065	-2.5	18.4
Transportation equipment	8,231	8,967	8,970	0.0	9.0
Motor vehicle	3,443	3,917	4,101	4.7	19.1
Motor vehicle body and trailer	335	345	333	-3.5	-0.7
Motor vehicle parts	2,307	2,436	2,592	6.4	12.3
Aerospace product and parts	1,431	1,503	1,375	-8.6	-3.9
Railroad rolling stock	164	154	143	-7.2	-12.9
Ship and boat building	313	225	199	-11.7	-36.5
Furniture and related product	1,045	1,337	1,299	-2.8	24.3
Miscellaneous manufacturing	1,294	1,377	1,426	3.6	10.2
Non-durable goods industries	28,594	34,728	35,956	3.5	25.7
Durable goods industries	30,546	33,766	34,240	1.4	12.1

^r revised

^p preliminary

1. Percent change calculated at thousands of dollars.

Source(s): Table [16-10-0047-01](#).

Table 3
Manufacturing sales: Provinces and territories – Seasonally adjusted

	March 2021	February 2022 ^r	March 2022 ^p	February to March 2022	March 2021 to March 2022
	millions of dollars			% change ¹	
Canada	59,140	68,494	70,196	2.5	18.7
Newfoundland and Labrador	512	289	328	13.6	-36.0
Prince Edward Island	203	226	256	12.9	25.6
Nova Scotia	962	856	901	5.3	-6.4
New Brunswick	1,671	2,178	2,260	3.8	35.3
Quebec	15,095	17,375	17,435	0.3	15.5
Ontario	25,424	29,397	30,108	2.4	18.4
Manitoba	1,716	1,934	1,989	2.9	15.9
Saskatchewan	1,548	2,015	2,238	11.1	44.6
Alberta	6,638	8,488	8,838	4.1	33.1
British Columbia	5,363	5,729	5,835	1.8	8.8
Yukon	3	3	3	14.4	10.0
Northwest Territories and Nunavut	4	4	4 ^E	11.6	2.6

^r revised

^p preliminary

^E use with caution

1. Percentage change calculated at thousands of dollars.

Source(s): Tables [16-10-0047-01](#) and [16-10-0048-01](#).

Table 4
Manufacturing sales by selected census metropolitan area – Seasonally adjusted

	March 2021	February 2022 ^r	March 2022 ^p	February to March 2022	March 2021 to March 2022
	millions of dollars			% change ¹	
Halifax	377	248 ^E	282	13.5	-25.2
Québec	1,509	1,900	2,221	16.9	47.2
Sherbrooke	205	225	246	9.4	19.6
Montréal	7,006	7,617	7,669	0.7	9.5
Ottawa–Gatineau, Ontario and Quebec	781	764	872	14.2	11.7
Toronto	9,847	11,424	11,704	2.5	18.9
Hamilton	1,791	1,864	2,125	14.0	18.6
Kitchener–Cambridge–Waterloo	2,216	2,091	2,203	5.3	-0.6
Windsor	1,545	1,538	1,665	8.2	7.7
Winnipeg	882	971	933	-4.0	5.8
Regina	541	685	845	23.3	56.2
Saskatoon	436	447	483	7.9	10.6
Calgary	934	1,132	1,148	1.4	22.8
Edmonton	2,653	4,020	4,389	9.2	65.4
Vancouver	2,591	2,906	2,975	2.4	14.8

^r revised

^p preliminary

^E use with caution

1. Percentage change calculated at thousands of dollars.

Note(s): Data in this table are seasonally adjusted.

Source(s): Table [16-10-0011-01](#).

Table 5
Manufacturing capacity utilization rates by industry – Unadjusted

	March 2021	February 2022 ^r	March 2022 ^p	February to March 2022	March 2021 to March 2022
	%			percentage point change	
Manufacturing	79.7	76.6	81.7	5.1	2.0
Non-durable goods industries	79.3	79.9	84.3	4.4	5.0
Food manufacturing	77.8 ^E	77.0 ^E	82.3 ^E	5.3	4.5
Beverage and tobacco product manufacturing	71.2	71.7	78.9	7.2	7.7
Beverage manufacturing	70.8 ^E	70.5 ^E	78.3 ^E	7.8	7.5
Tobacco manufacturing	72.9	79.3	83.1	3.8	10.2
Textile mills	81.6	78.8 ^E	87.8 ^E	9.0	6.2
Textile product mills	77.1	68.7 ^E	77.1 ^E	8.4	0.0
Clothing manufacturing	71.3	82.0 ^E	84.6 ^E	2.6	13.3
Leather and allied product manufacturing	74.4 ^E	76.0	84.3 ^E	8.3	9.9
Paper manufacturing	86.8	82.0	87.5	5.5	0.7
Printing and related support activities	73.0 ^E	70.0 ^E	78.2 ^E	8.2	5.2
Petroleum and coal products manufacturing	82.6	89.6	91.3	1.7	8.7
Chemical manufacturing	81.0	78.7	81.7 ^E	3.0	0.7
Plastics and rubber products manufacturing	76.1	74.5 ^E	79.1 ^E	4.6	3.0
Plastic product manufacturing	75.3 ^E	74.6 ^E	78.7 ^E	4.1	3.4
Rubber product manufacturing	80.3	74.0	81.8	7.8	1.5
Durable goods industries	80.1	73.5	79.3	5.8	-0.8
Wood product manufacturing	89.4	83.3	85.9	2.6	-3.5
Non-metallic mineral product manufacturing	74.1 ^E	60.8 ^E	68.0 ^E	7.2	-6.1
Primary metal manufacturing	79.7	72.5	75.2	2.7	-4.5
Fabricated metal product manufacturing	70.6 ^E	71.6 ^E	74.7 ^E	3.1	4.1
Machinery manufacturing	76.7 ^E	75.5 ^E	78.2 ^E	2.7	1.5
Computer and electronic product manufacturing	84.4	74.7	84.4	9.7	0.0
Electrical equipment, appliance and component manufacturing	79.1	80.9 ^E	87.3 ^E	6.4	8.2
Transportation equipment manufacturing	82.3	70.1	80.5	10.4	-1.8
Furniture and related product manufacturing	78.5 ^E	81.0 ^E	87.3 ^E	6.3	8.8
Miscellaneous manufacturing	79.1	75.1	81.8 ^E	6.7	2.7

^r revised

^p preliminary

^E use with caution

Note(s): Data in this table are not seasonally adjusted.

Source(s): Table 16-10-0012-01.

Sustainable development goals

On January 1, 2016, the world officially began implementing the [2030 Agenda for Sustainable Development](#)—the United Nations' transformative plan of action that addresses urgent global challenges over the following 15 years. The plan is based on 17 specific sustainable development goals.

The Monthly Survey of Manufacturing is an example of how Statistics Canada supports the reporting on the global sustainable development goals. This release will be used to help measure the following goal:



Note to readers

Starting with the May 2022 release of March data, seasonally adjusted sales estimates will be produced for 3 additional census metropolitan areas (CMAs)—Sherbrooke, Kitchener–Cambridge–Waterloo, and Windsor—as part of the Monthly Survey of Manufacturing, alongside the 12 CMAs for which estimates were already being produced prior to this release. Unadjusted and seasonally adjusted estimates of sales of goods manufactured have been compiled from January 2018 to March 2022 and are available in table 16-10-0011-01.

Estimates of sales of goods manufactured, inventories and orders in tables 16-10-0047-01 and 16-10-0048-01 have been revised back to January 2018 for unadjusted data, and back to January 2016 for seasonally adjusted data. Real manufacturing sales, orders, inventory owned and inventory-to-sales ratio estimates in table 16-10-0013-01 have been revised back to January 2016.

Unadjusted estimates of capacity utilization rates, in table 16-10-0012-01, have been revised back to January 2018.

Monthly data in this release are seasonally adjusted and are expressed in current dollars, unless otherwise specified.

Seasonally adjusted data are data that have been modified to eliminate the effect of seasonal and calendar influences to allow for more meaningful comparisons of economic conditions from period to period. For more information on seasonal adjustment, see [Seasonally adjusted data – Frequently asked questions](#).

Trend-cycle estimates are included in selected charts as a complement to the seasonally adjusted series. These data represent a smoothed version of the seasonally adjusted time series and provide information on longer-term movements, including changes in direction underlying the series. For information on trend-cycle data, see [Trend-cycle estimates – Frequently asked questions](#).

Both seasonally adjusted data and trend-cycle estimates are subject to revision as additional observations become available. These revisions could be large and could even lead to a reversal of movement, especially for reference months near the end of the series or during periods of economic disruption.

Non-durable goods industries include food; beverage and tobacco products; textile mills; textile product mills; clothing; leather and allied products; paper; printing and related support activities; petroleum and coal products; chemicals; and plastics and rubber products.

Durable goods industries include wood products; non-metallic mineral products; primary metals; fabricated metal products; machinery, computer and electronic products; electrical equipment; appliances and components; transportation equipment; furniture and related products; and miscellaneous manufacturing.

Production-based industries

For the aerospace and shipbuilding industries, the value of production is used instead of the value of sales of goods manufactured. The value of production is calculated by adjusting monthly sales of goods manufactured by the monthly change in inventories of goods in process and finished products manufactured. The value of production is used because of the extended period of time that it normally takes to manufacture products in these industries.

Unfilled orders are a stock of orders that will contribute to future sales, assuming that the orders are not cancelled.

New orders are those received, whether sold in the current month or not. New orders are measured as the sum of sales for the current month plus the change in unfilled orders from the previous month to the current month.

Manufacturers reporting sales, inventories and unfilled orders in US dollars

Some Canadian manufacturers report sales, inventories and unfilled orders in US dollars. These data are then converted to Canadian dollars as part of the data production cycle.

For sales, based on the assumption that they occur throughout the month, the average monthly exchange rate for the reference month established by the Bank of Canada is used for the conversion. The monthly average exchange rate is available in table 33-10-0163-01. Inventories and unfilled orders are reported at the end of the reference period. For most respondents, the daily average exchange rate on the last working day of the month is used for the conversion of these variables.

However, some manufacturers choose to report their data as of a day other than the last working day of the month. In these instances, the daily average exchange rate on the day selected by the respondent is used. Note that because of exchange rate fluctuations, the daily average exchange rate on the day selected by the respondent can differ from both the exchange rate on the last working day of the month and the monthly average exchange rate. Daily average exchange rate data are available in table 33-10-0036-01.

Revision policy

Each month, the Monthly Survey of Manufacturing releases preliminary data for the reference month and revised data for the previous three months. Revisions are made to reflect new information provided by respondents and updates to administrative data.

Once a year, a revision project is undertaken to revise multiple years of data.

Real-time data tables

Real-time data tables 16-10-0118-01, 16-10-0119-01, 16-10-0014-01 and 16-10-0015-01 will be updated on May 23, 2022.

Next release

Data from the Monthly Survey of Manufacturing for April will be released on June 14, 2022.

Available tables: [16-10-0011-01](#) to [16-10-0013-01](#) , [16-10-0047-01](#) and [16-10-0048-01](#).

Definitions, data sources and methods: survey number [2101](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).