

# MANUFACTURING

## OVERVIEW

The manufacturing sector expanded by 15.5 per cent year-on-year in the fourth quarter of 2021, faster than the 7.9 per cent growth clocked in the preceding quarter. Growth in the sector was supported by output expansions across all clusters.

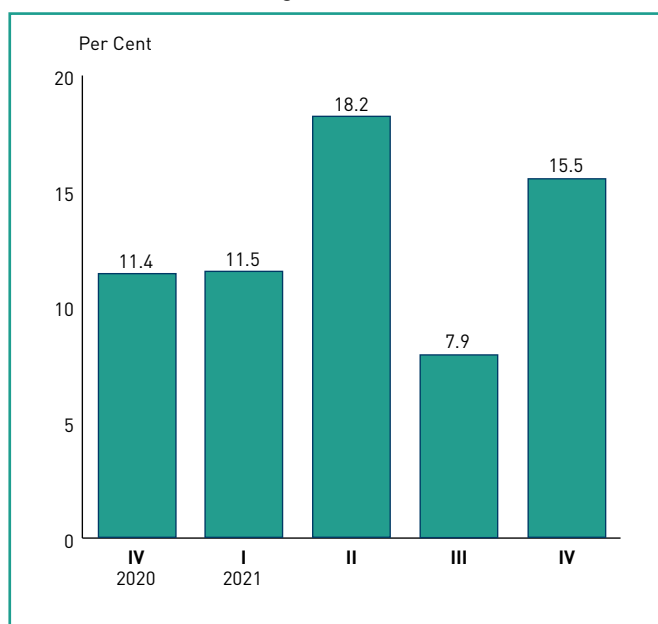
For the whole of 2021, the manufacturing sector grew by 13.2 per cent, extending the 7.5 per cent growth in 2020. All clusters recorded output growth.

## OVERALL MANUFACTURING PERFORMANCE

Manufacturing output increased by 15.5 per cent year-on-year in the fourth quarter of 2021 on account of output expansions across all clusters (Exhibit 6.1).

For the whole of 2021, the manufacturing sector expanded by 13.2 per cent, extending the 7.5 per cent growth in 2020. The strong performance of the sector was driven by output growth across all clusters (Exhibit 6.2).

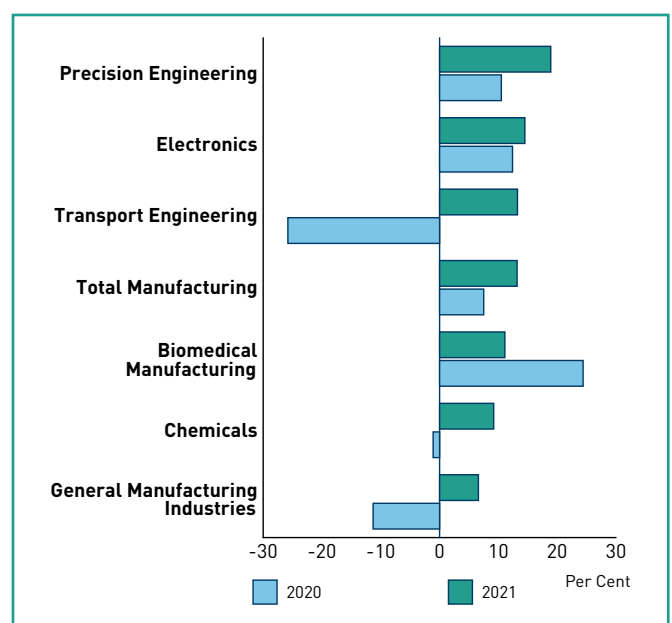
**Exhibit 6.1: Manufacturing Growth Rates**



## PERFORMANCE OF CLUSTERS

The biomedical manufacturing cluster grew robustly by 52.1 per cent year-on-year in the fourth quarter of 2021. Growth was driven by the pharmaceuticals segment, which saw its output surge by 87.4 per cent on account of a different mix of active pharmaceutical ingredients (APIs) produced and a higher level of biological products produced. On the other hand, output in the medical technology segment declined by 6.5 per cent as export demand for medical devices fell from the high base in the fourth quarter of 2020. For 2021 as a whole, output in the biomedical manufacturing cluster increased by 11.1 per cent, supported by growth in both segments.

**Exhibit 6.2: Manufacturing Clusters' Growth**



Output in the transport engineering cluster rose by 36.0 per cent year-on-year in the fourth quarter on account of expansions in the marine & offshore engineering (M&OE) and aerospace segments. In particular, the M&OE segment expanded by 52.8 per cent from a low base in the fourth quarter of 2020, supported by a higher level of work done in shipbuilding & repairing activities. Likewise, output in the aerospace segment grew by 43.2 per cent as demand for maintenance, repair & overhaul activities rose due to the loosening of global travel restrictions in the fourth quarter of 2021 compared to that in the same quarter of 2020. By contrast, the land transport segment contracted by 13.8 per cent from the high base in the fourth quarter of 2020, due to a lower level of output of parts and accessories for motor vehicles. For the whole of 2021, the transport engineering cluster expanded by 13.2 per cent, bolstered by output expansions in all segments.

The precision engineering cluster grew by 12.9 per cent year-on-year in the fourth quarter. Growth in the cluster was bolstered by the machinery & systems segment, which saw its output rise by 23.3 per cent on account of a higher level of production of semiconductor equipment and process control equipment. On the other hand, output in the precision modules & components segment declined by 7.4 per cent, weighed down by a fall in the production of optical products. For the full year, the precision engineering cluster expanded by 18.9 per cent, driven by output expansions in both segments.

The chemicals cluster posted growth of 7.9 per cent year-on-year in the fourth quarter, supported by output growth in all segments except for the other chemicals segment. The petroleum and petrochemicals segment expanded by 16.0 per cent and 14.0 per cent respectively, with the former recording growth from a low base caused by plant maintenance shutdowns and soft exports demand amidst the COVID-19 outbreak a year ago. Likewise, output in the specialty chemicals segment rose by 2.0 per cent on the back of an increase in the output of industrial gases. Conversely, the other chemicals segment contracted by 1.0 per cent, weighed down by a lower level of output of fragrances. For 2021 as a whole, the chemicals cluster grew by 9.2 per cent, supported by output expansions in all segments.

The general manufacturing cluster expanded by 5.4 per cent year-on-year in the fourth quarter. Growth was supported by the miscellaneous industries segment, which grew by 18.0 per cent on account of an increase in the production of construction-related materials, jewellery and wearing apparel. By contrast, the printing and food, beverages & tobacco segments recorded output declines of 6.1 per cent and 0.6 per cent respectively, with the latter weighed down by a fall in the output of milk products due to weaker export demand. For the whole of 2021, the general manufacturing cluster grew by 6.6 per cent.

Growth in the electronics cluster came in at 4.0 per cent year-on-year in the fourth quarter, supported by output expansions across all segments. The infocomms & consumer electronics, other electronic modules & components, computer peripherals & data storage and semiconductors segments expanded by 27.4 per cent, 12.4 per cent, 11.2 per cent and 1.8 per cent respectively. In particular, the semiconductors segment continued to be supported by robust demand for semiconductors from the 5G markets. For 2021 as a whole, the electronics cluster grew by 14.5 per cent on account of the strong demand for semiconductors amidst the global shortage of semiconductors.