

# 6.1 MANUFACTURING

## OVERVIEW

The manufacturing sector contracted by 2.3 per cent year-on-year in the fourth quarter of 2019, extending the 0.7 per cent contraction in the preceding quarter. The sector's performance was dragged down mainly by a decline in the output of the electronics cluster.

For the whole of 2019, the manufacturing sector shrank by 1.4 per cent, a reversal from the 7.0 per cent expansion in the previous year. The sector contracted on the back of output declines in the electronics, precision engineering, transport engineering and chemicals clusters.

## OVERALL MANUFACTURING PERFORMANCE

In the fourth quarter, manufacturing output fell by 2.3 per cent, due to output contractions in the electronics, transport engineering, chemicals and general manufacturing clusters. On the other hand, output in the biomedical manufacturing and precision engineering clusters increased during the quarter [Exhibit 6.1].

For the whole of 2019, the manufacturing sector contracted by 1.4 per cent, a sharp reversal from the 7.0 per cent growth achieved in 2018. The contraction in the sector was due to output declines in the electronics, precision engineering, transport engineering and chemicals clusters [Exhibit 6.2].

Exhibit 6.1: Manufacturing Growth Rates

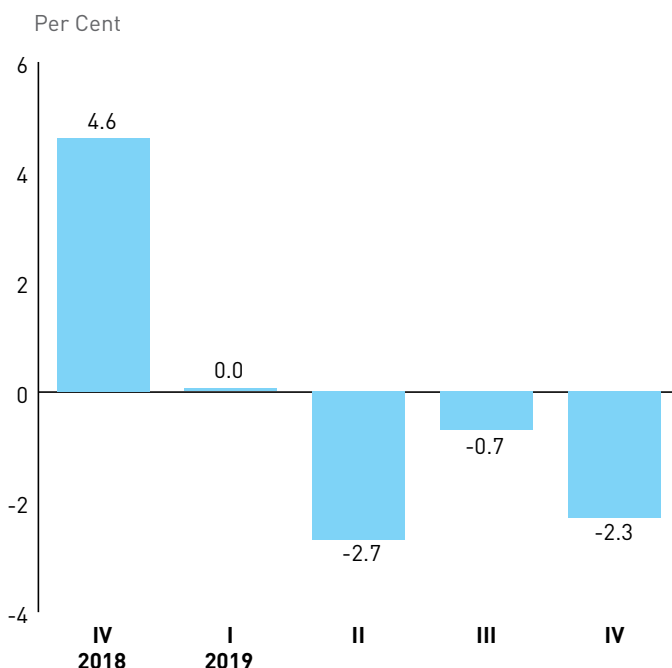
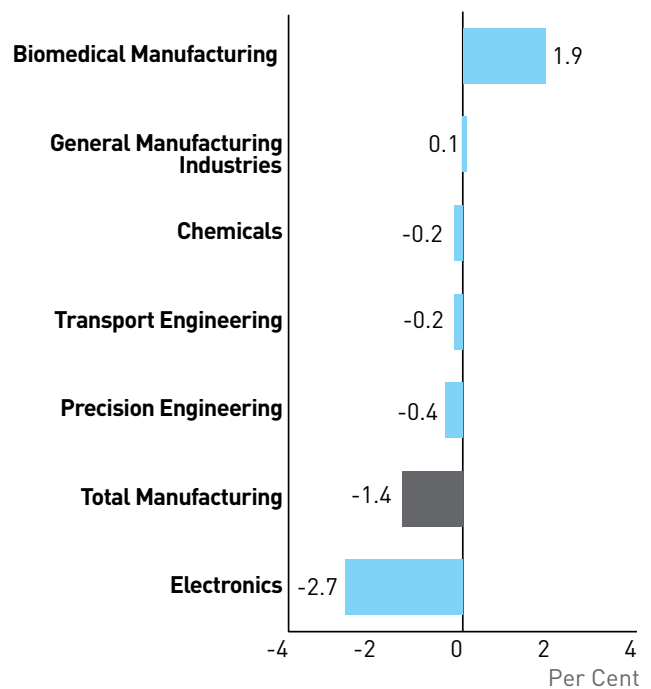


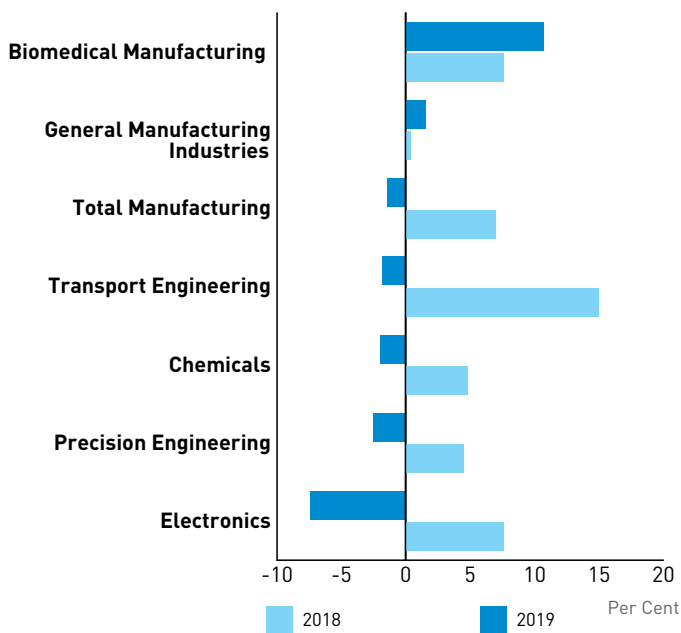
Exhibit 6.2: Percentage-Point Contribution to Manufacturing Sector's Growth in 2019



## PERFORMANCE OF CLUSTERS

Output of the biomedical manufacturing cluster increased by 8.1 per cent in the fourth quarter, supported by growth in both the pharmaceuticals and medical technology segments. The pharmaceuticals segment expanded by 7.1 per cent because of a higher level of production of active pharmaceutical ingredients (APIs) and biological products. The medical technology segment grew by 10 per cent on the back of higher export demand for medical devices. For the full year, output of the biomedical manufacturing cluster rose by 11 per cent, supported by strong output expansions in both segments.

Exhibit 6.3: Manufacturing Clusters' Growth



Output of the general manufacturing cluster fell by 2.0 per cent in the fourth quarter. The performance of the cluster was weighed down by the food, beverages & tobacco and printing segments, which contracted by 5.2 per cent and 9.3 per cent respectively. The former was due to a fall in the production of milk powder products. By contrast, the miscellaneous industries segment expanded by 4.2 per cent on account of an increase in the production of wearing apparel and construction-related products. For the whole of 2019, the general manufacturing cluster grew by 1.5 per cent.

The electronics cluster contracted by 7.8 per cent in the fourth quarter, on the back of output declines in the semiconductors (-8.8 per cent), computer peripherals (-20 per cent) and infocomms & consumer electronics (-6.2 per cent) segments. By contrast, output in the data storage and other electronics modules & components segments rose by 23 per cent and 0.6 per cent respectively. For 2019 as a whole, the electronics cluster shrank by 7.4 per cent on account of weak global semiconductor demand and uncertainties related to the US-China trade conflict throughout the year.

The precision engineering cluster expanded by 6.3 per cent in the fourth quarter, supported by output expansions in both the precision modules & components (PMC) and machinery & systems (M&S) segments. In particular, the PMC segment expanded by 12 per cent on the back of robust growth in the output of optical instruments and metal precision components. Similarly, the M&S segment grew by 2.4 per cent due to an increase in the production of semiconductor equipment. For the whole of 2019, the precision engineering cluster shrank by 2.5 per cent.

The transport engineering cluster contracted by 6.3 per cent in the fourth quarter, dragged down by a 25 per cent decline in the output of the marine & offshore engineering (M&OE) segment. The latter was due to a step-down in the level of offshore and shipbuilding activities. On the other hand, the aerospace and land transport segments expanded by 12 per cent and 7.2 per cent respectively. In particular, the aerospace segment was supported by an increase in the volume of repair and maintenance jobs from commercial airlines. For the whole of 2019, the transport engineering cluster contracted by 1.8 per cent, as output declines in the M&OE segment outweighed output expansions in the aerospace and land transport segments.

The chemicals cluster shrank by 8.2 per cent in the fourth quarter, with all segments recording lower levels of output. The poor performance of the cluster was primarily driven by the petrochemicals and specialty chemicals segments, which contracted by 13 per cent and 7.0 per cent respectively due to scheduled plant maintenance shutdowns. For 2019 as a whole, the output of the chemicals cluster fell by 2.0 per cent, with declines in all segments, except for the other chemicals segment.