6.1 MANUFACTURING

OVERVIEW

The manufacturing sector expanded by 4.8 per cent in the fourth quarter, supported largely by robust output growth in the electronics and precision engineering clusters.

For the whole of 2017, the manufacturing sector grew by 10 per cent, accelerating from the 3.7 per cent expansion in 2016. Growth was largely driven by the electronics and precision engineering clusters, even as the biomedical manufacturing, transport engineering and general manufacturing industries clusters contracted.

OVERALL MANUFACTURING PERFORMANCE

In the fourth quarter, the manufacturing sector grew by 4.8 per cent. Growth was underpinned by output expansions in all clusters, with the exception of the biomedical manufacturing and transport engineering clusters (Exhibit 6.1).

For the whole of 2017, the manufacturing sector grew by 10 per cent, accelerating from the 3.7 per cent growth in 2016. The robust performance was mainly driven by the electronics and precision engineering clusters, which collectively accounted for approximately 126 per cent of the overall expansion (Exhibit 6.2).

Exhibit 6.1: Manufacturing Growth Rates

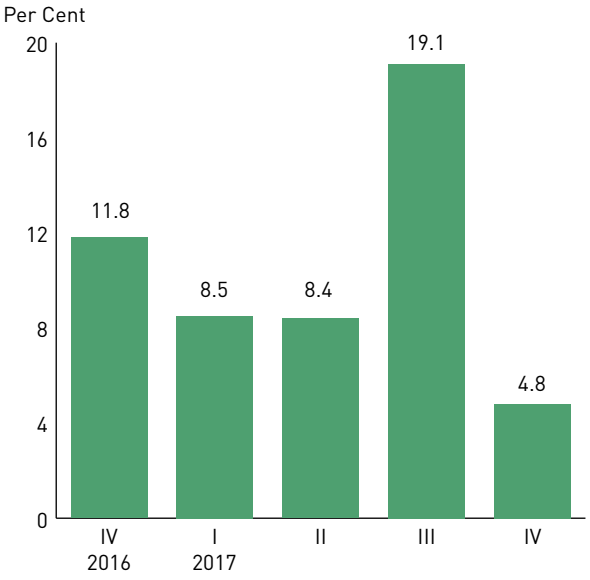
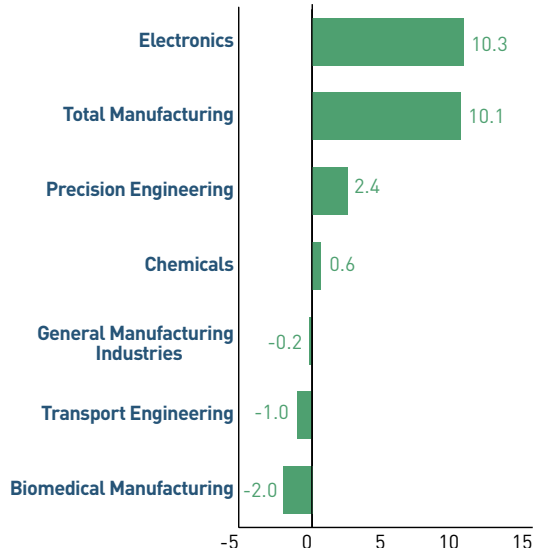


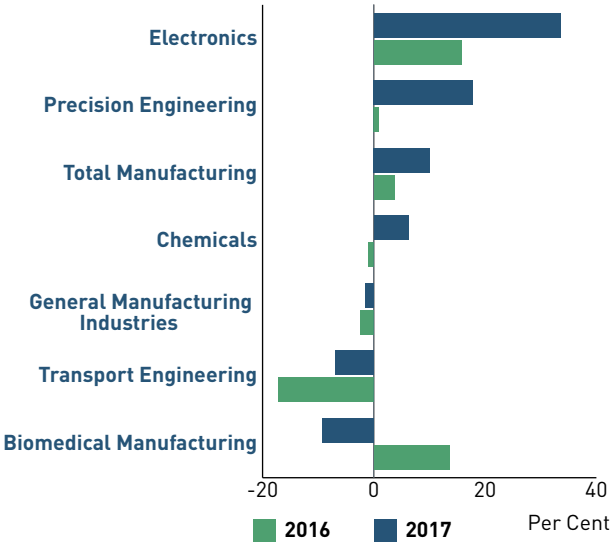
Exhibit 6.2: Percentage-point Contribution to Manufacturing Sector's Growth in 2017



Performance Of Clusters

The electronics cluster grew by 24 per cent in the fourth quarter, largely due to the semiconductors segment, which expanded by 35 per cent. Specifically, the semiconductors segment benefitted from robust global semiconductors demand, which was in turn driven by key end markets such as the smartphone market. At the same time, the computer peripherals segment registered healthy growth of 9.5 per cent, supported by buoyant demand for printer-related products. On the other hand, the data storage and other electronic modules & components segments contracted by 25 per cent and 7.5 per cent respectively. For the full year, the electronics cluster expanded by 34 per cent as the healthy performance of the semiconductors and computer peripherals segments more than offset the weakness in the data storage segment (Exhibit 6.3).

Exhibit 6.3: Manufacturing Clusters' Growth



The precision engineering cluster expanded by 20 per cent in the fourth quarter, supported by both the precision modules & components (PMC) and machinery & systems (M&S) segments. Output in the PMC segment rose by 40 per cent due to an increase in the production of dies, moulds, tools, jigs & fixture, optical instruments and metal precision components. Meanwhile, the M&S segment grew by 8.9 per cent in tandem with healthy export demand for semiconductor manufacturing equipment. For the whole of 2017, the output of the precision engineering cluster rose by 18 per cent on account of robust expansions in both segments.

The chemicals cluster grew by 12 per cent in the fourth quarter, with all segments recording growth. In particular, the petrochemicals segment grew by 23 per cent on the back of production capacity expansions, while the petroleum segment expanded by 13 per cent supported by higher refining margins. At the same time, the other chemicals and specialties segments posted growth of 8.1 per cent and 6.2 per cent respectively. For 2017 as a whole, the chemicals cluster expanded by 6.2 per cent, supported by growth in all segments.

Output of the general manufacturing industries cluster increased by 6.6 per cent in the fourth quarter, primarily due to the strong performance of the food, beverages & tobacco (FBT) segment, which grew by 18 per cent on the back of a surge in the production of beverages products. On the other hand, the printing segment shrank by 11 per cent due to weak demand for commercial printing, while output in the miscellaneous industries segment declined by 0.6 per cent on account of a lower production of construction-related materials. For the whole of 2017, the general manufacturing industries cluster contracted by 1.6 per cent, as output declines in the printing and miscellaneous industries segments outweighed output gains in the FBT segment.

Output of the transport engineering cluster fell by 7.8 per cent in the fourth quarter. The aerospace segment recorded robust growth of 13 per cent due to a higher volume of repair and maintenance work from commercial airlines. However, this was more than offset by output declines in the marine & offshore engineering (M&OE) and land transport segments of 22 per cent and 11 per cent respectively. In particular, the M&OE segment remained weak on account of low levels of rig-building, shipbuilding and repair activities. For the full year, the transport engineering cluster shrank by 6.9 per cent, dragged down mainly by the M&OE segment.

The biomedical manufacturing cluster contracted by 28 per cent in the fourth quarter, weighed down by the pharmaceuticals segment (-37 per cent) on the back of a drop in the production of active pharmaceutical ingredients and biological products. However, the medical technology segment, which grew at a healthy pace of 3.3 per cent, provided some support to the cluster. For 2017 as a whole, output in the biomedical manufacturing cluster fell by 9.3 per cent, led by the output decline in the pharmaceuticals segment.