

# The Japanese economy: topic of the month

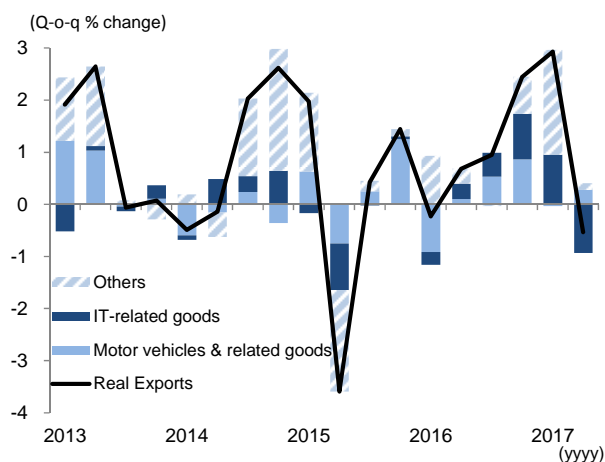
## Examination of the IT cycle

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Japan's real GDP grew a strong +1.0% q-o-q in the Apr-Jun quarter of 2017. While domestic demand – mainly personal consumption and public investment – served as the driver of growth, external demand dipped into negative territory (-0.3%pt) for the first time in six quarters. Calculations on the basis of the Bank of Japan's data on real exports, which provides a breakdown of its components, reveals that IT-related goods that had continued to increase served as a significant drag (**Chart 1**). The economic recovery from the second half of 2016 is due largely to the improvement of the global IT cycle (the cyclical trend of demand for IT-related goods such as electronic parts & devices). Will this improvement fizzle out?

The IT cycle is subject to fluctuations stemming from various factors: short term factors such as the inventory cycle and demand for new smartphone models, and medium to long term factors reflecting the expansion of IT-related demand accompanying the evolution of final products. **Chart 2** decomposes fluctuations in global semiconductor sales into short term cyclical factors (up to approximately 3 years) and medium to long term factors (approximately 3 to 11 years). It shows a recent surge in short term components, probably due to the

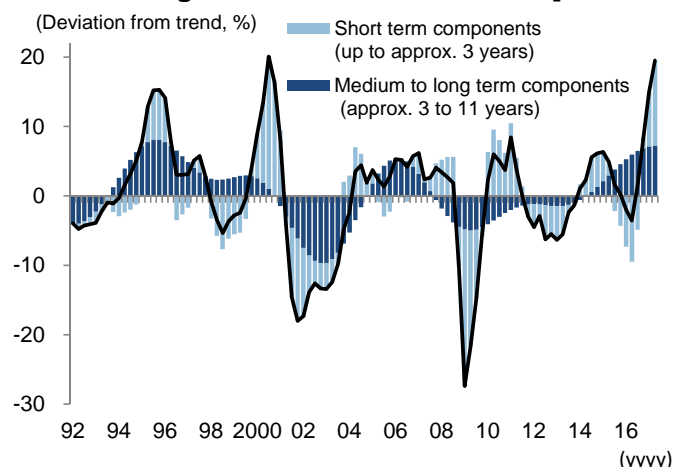
[ Chart 1: Decomposition of real exports ]



Note: Decomposition based on export weights in 2015. "IT-related goods" and "motor vehicles & related goods" follow the definitions by the Bank of Japan.

Source: Made by MHRI based upon releases by the Bank of Japan, Ministry of Finance

[ Chart 2: Spectral analysis of global semiconductor sales ]



Note: Wavelet analysis of semiconductor sales (monthly data converted into quarterly averages). The latest quarterly readings are Apr-May 2017 averages

Source: Made by MHRI based upon World Semiconductor Trade Statistics (WSTS)

rapid progress of Chinese smartphone makers, among other factors. Taking into consideration the average cycle length, the rapid pace of expansion provides reason to believe that a peak-out is not far off. Medium to long term components are also contributing positively, reflecting the progress of Internet of Things (IoT). In contrast to the short term components, however, the odds are high that they will continue to serve as drivers for the time being in view of past durations. Therefore, even though the improvement of the IT cycle will weaken along with the ebb of short term factors, there should be no need for alarm since medium to long term factors would serve as underpinnings. Accordingly, Japan's exports are also forecast to return to a gradual recovery path.

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