

Economic Outlook

Technology Industries of Finland

4 | 2017

**Global And Finnish
Economic Outlook**
Global growth to continue
at a steady pace in 2018
s. 3

Technology Industries In Finland
New orders and
order books shrink
s. 5

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Global growth to continue at a steady pace in 2018

Global economic activity developed as expected during the autumn, and broad-based growth has continued both geographically and by sector. According to its October forecast, the International Monetary Fund (IMF) expects global growth to rise to 3.6 per cent in 2017 and 3.7 per cent in 2018.

Growth in Finland's main export markets in Europe will slow down slightly from 2017. The euro area is expected to grow by less than two per cent in 2018, while growth in Central and Eastern Europe is projected to reach 3.5 per cent. Growth continues in Russia, but will fall short of the less than two per cent rate achieved in 2017.

In the United States, growth is expected to pick up slightly and strengthen to 2.3 per cent.

Emerging economies in Asia continue to be the main driver for global growth and growth in Asia is projected to remain at 6.5 per cent. The upswing in Brazil is expected to bring the growth rate for Latin America as a whole to approximately two per cent.

Despite the monetary stimulus measures taken by central banks, inflation expectations remain moderate in the euro area, the United States and Japan. Consumer price inflation is projected to reach approximately 1.5 per cent in the euro area in 2018, and two per cent in the United States. In Japan, inflation is expected to remain at 0.5 per cent. In contrast, consumer price inflation in the emerging economies is projected to reach approximately 4.5 per cent.

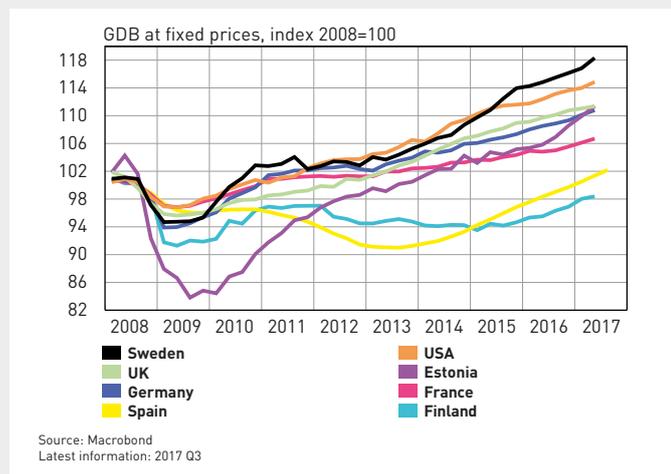
Growth in Finland slowing down

According to IMF's October forecast, the GDP in Finland is projected to expand by 2.8 per cent in 2017, but only by 2.3 per cent in 2018. The growth potential of the Finnish economy is mainly limited by the reduced production capacity of the export sector, but also by the shrinking working-age population. The fact that the availability of suitable labour force on the market must be determined first before considering labour immigration makes it increasingly difficult for companies to fill positions.

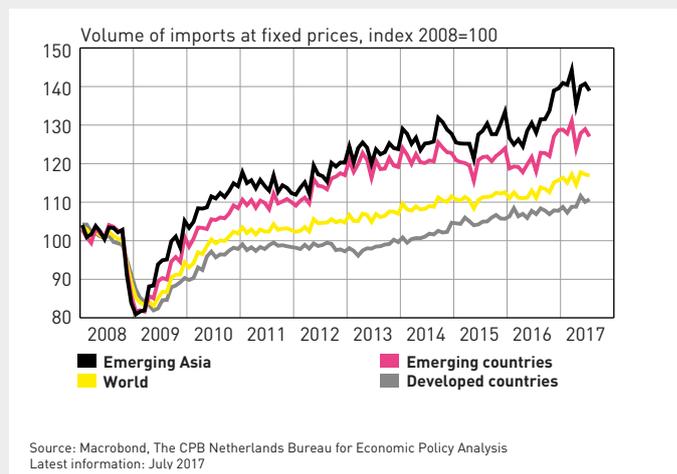
Some signals of the limited growth potential of the Finnish economy are already emerging. Considering that the production capacity of the export sector has fallen by around one fifth since 2008, there are limits to how much exports can grow, and these limitations are starting to show.

While there was an upswing in exports from Finland in the first quarter of 2017, they have not grown since. Export figures from the early autumn indicate the same. The capacity expansion due to the ship orders in Turku, car manufacturing in Uusikaupunki and the new Äänekoski pulp mill will continue to increase the value of

Gross Domestic Product Has Grown Long in Europe and the USA, Finland is Lagging Behind



World Trade Has Picked up Again



exports from Finland somewhat for another two years. However, Finland needs more significant investments such as these.

To ensure economic growth, the first priority is to improve companies' ability and preconditions for investing in Finland. Companies' investment trends in Finland differ from recent developments in our main competitor countries. In other countries, investments have already exceeded the 2008 level. In Sweden, for example, real investments in 2017 will be some 10 per cent higher than in 2008, while in the United States investments will be 18 per cent higher and in Germany two per cent higher than in 2008. In Finland, investments are almost 20 per cent lower.

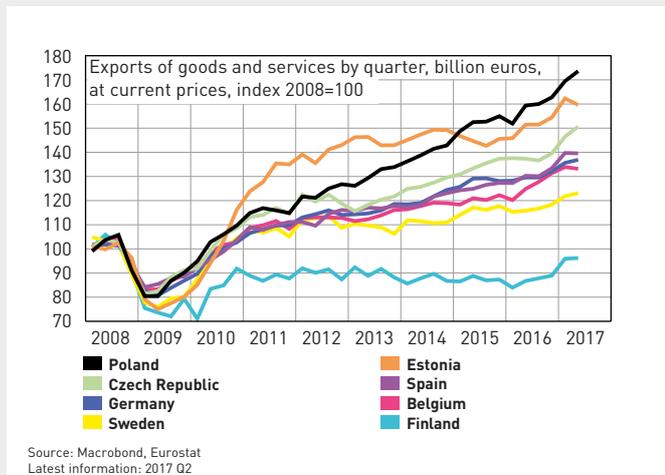
In Sweden, companies' investment rate (investment relative to value added) is much higher than in Finland. According to the latest information, companies' investment rate in Sweden is some six percentage points higher than in Finland. This is yet another

indicator where Finland has trailed Sweden every year during the 2000s. In recent years, the gap has widened significantly.

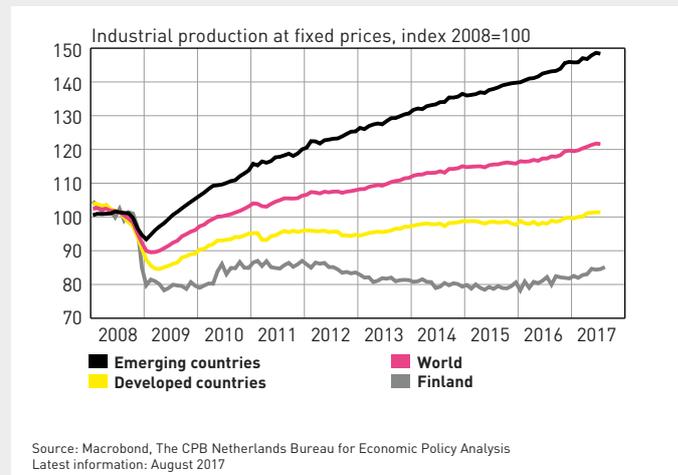
Companies will invest in Finland if they have the ability and desire to do so. Companies' ability to invest could be strengthened by avoiding general wage increases and creating better conditions for local bargaining. Corporate taxation should also be reformed to better support investments. Currently, corporate taxation in Finland does not provide competitive advantage for investments and growth of companies.

Pay development in recent years has not supported companies' ability to invest. Wage and non-wage labour costs have increased nominally by 12 per cent since 2008, while profits after tax have fallen by 21 per cent and investment by almost the same amount.

Finnish Exports Have Lagged Behind the Competition Countries



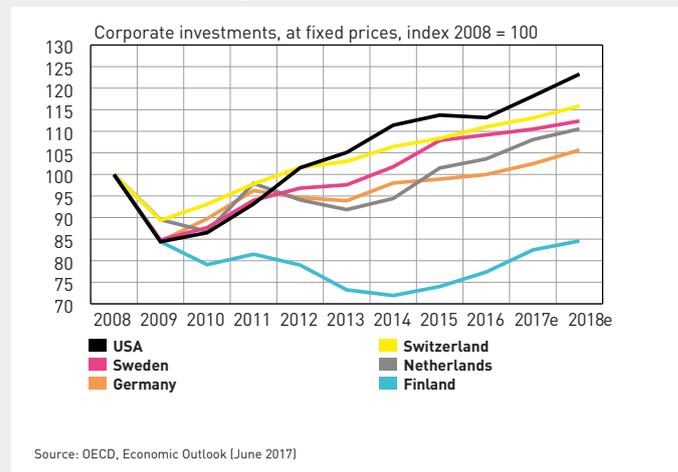
Finland's Industrial Production Has Lagged Behind the Competition Countries



Finland's Economic Growth is Weakened by a 20% Reduction in the Export Sector Production Capacity



Companies in Finland Have Invested Significantly Less than in Competing Countries



New orders and order books shrink

The turnover of technology industry companies in Finland between January and September was 11 per cent higher than twelve months earlier. Half of the increase was attributable to volume growth and half to rising world market prices of raw materials and components. In 2016, the turnover amounted to EUR 67.3 billion. In 2008, prior to the financial crisis, the turnover of technology industry companies in Finland totalled EUR 85.7 billion.

The level of new orders in the technology industries between July and September fell short of the level reported between April and June. This is not only due to the large ship orders received in the spring. Both order books and the number of requests for tender received by companies shrank slightly.

The companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 22 per cent lower than in the preceding quarter, but 14 per cent higher than in the corresponding period in 2016. Of the respondents, 62 per cent said the number of new orders was down since the April–June period, 30 per cent said it was up and eight per cent said it had remained stable.

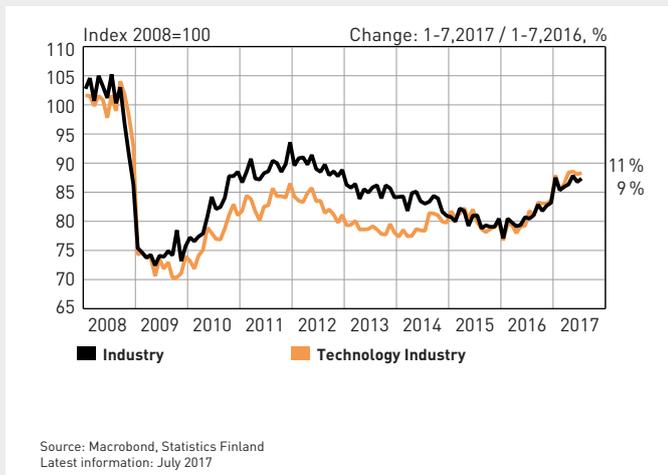
At the end of September, the value of order books was slightly lower than at the end of June, but 15 per cent higher than in September 2016. Forty-nine per cent of the companies reported a decrease in their order books since June, while 36 per cent reported an increase and 15 per cent had seen no change.

Judging from order trends in recent months, the turnover of technology industry companies is expected to be higher during the rest of 2017 than in the corresponding period last year.

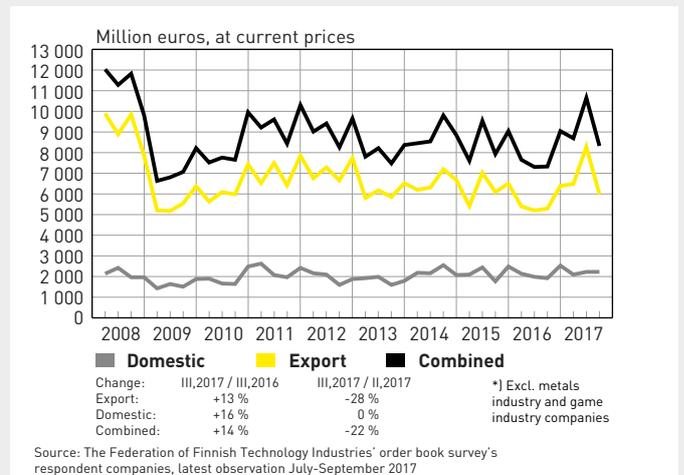
The number of personnel employed by technology industry companies in Finland increased between January and September from the 2016 average. At the end of September, the industry employed approximately 298,000 people. Personnel was up by less than three per cent, or 8,000 employees from the 2016 average.

The recruitment activities of technology industry companies have picked up markedly in 2017 in comparison to recent years. They recruited a total of 33,500 new employees between January and September. In 2016, total recruitments came to 28,500. Some companies were increasing their personnel, while others were hiring new employees due to retirements and employee turnover.

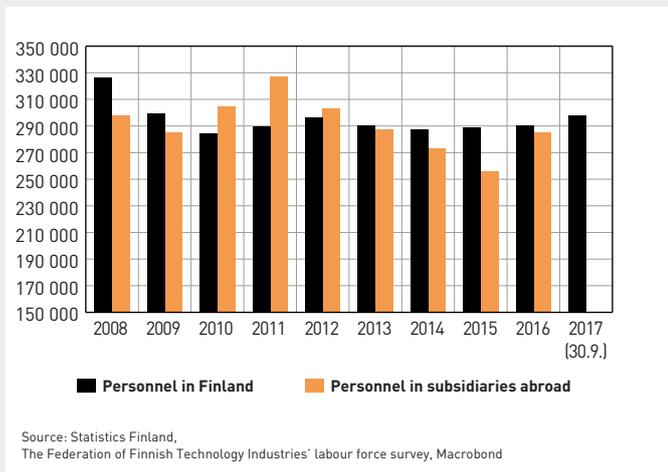
Turnover of the Technology Industry and the Entire Industry in Finland



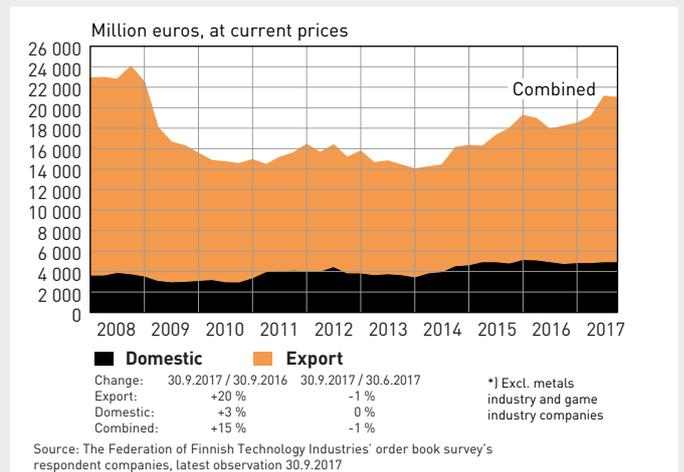
Value of New Orders in the Technology Industry* in Finland



Technology Industry Personnel in Finland and Abroad



Value of Order Books in the Technology Industry* in Finland





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Electronics and Electrotechnical Industry in Finland

Order growth dips

The turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland between January and July was nine per cent higher than twelve months earlier. In 2016, the turnover amounted to EUR 13.3 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 30.4 billion.

The growth of both new orders and order books in the electronics and electrotechnical industry dipped between July and September. In comparison to the April–June period, more companies saw a fall in orders than an increase. Nevertheless, the industry turnover will grow for the first time since 2008 this year.

The electronics and electrotechnical companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was four per cent lower than in the preced-

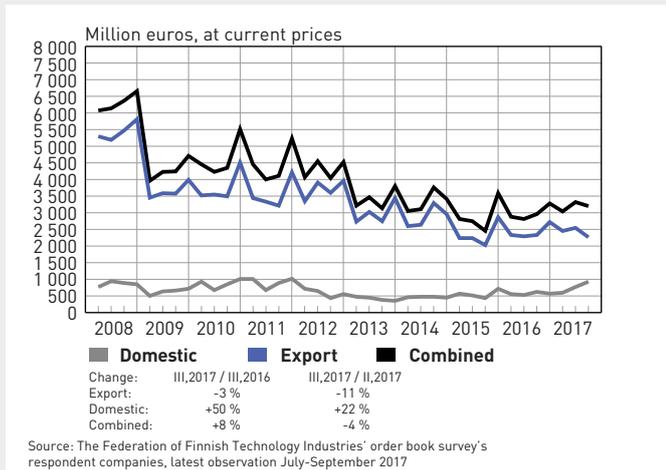
ing quarter, but eight per cent higher than in the corresponding period in 2016.

At the end of September, the value of order books was three per cent lower than at the end of June, but four per cent higher than in September 2016.

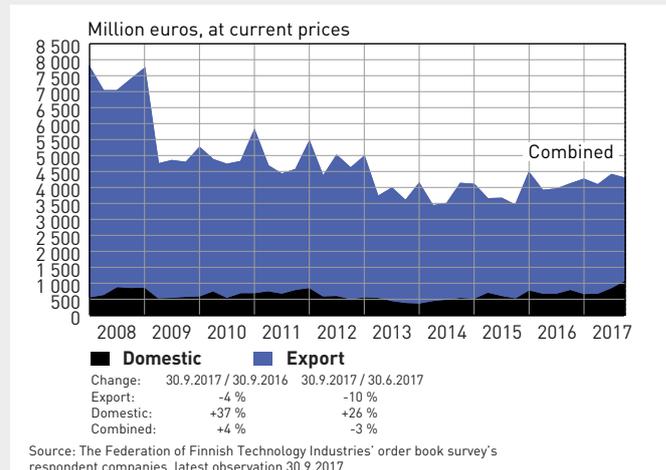
Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies is expected to remain at the same or slightly higher level during the rest of 2017 than in the corresponding period last year.

The number of personnel employed by electronics and electrotechnical companies in Finland declined slightly in the January-September period from the 2016 average. At the end of September, the industry employed approximately 39,000 people. Personnel was down by some one per cent, or 400 employees from the 2016 average.

Value of New Orders in the Electronics and Electrotechnical Industry in Finland



Value of Order Books in the Electronics and Electrotechnical Industry in Finland





Mechanical Engineering in Finland

Drop in new orders in the autumn

The turnover of mechanical engineering companies (machinery, metal products and vehicles) in Finland between January and July was nine per cent higher than twelve months earlier. In 2016, the turnover amounted to EUR 27.7 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 33.3 billion.

The level of new orders in mechanical engineering fell in the July-September period from the April-June period. The growth of order books levelled out. This trend is not only due to the large ship orders received in the spring. In comparison to the April-June period, more companies saw a fall in orders than an increase.

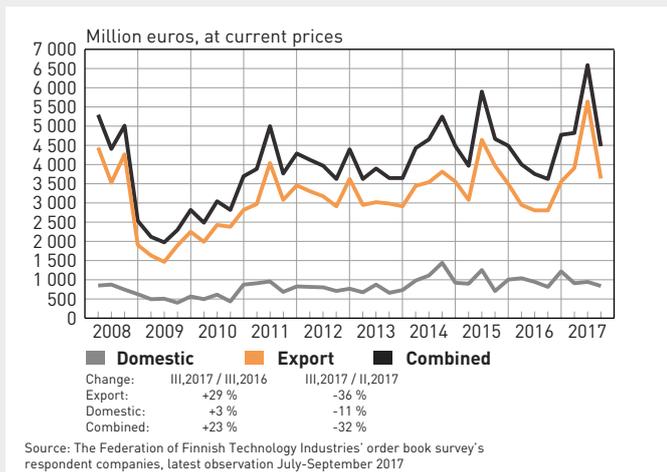
The mechanical engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 32 per cent lower than in the preceding quarter, but 23 per cent higher than in the corresponding period in 2016.

At the end of September, the value of order books was similar to that at the end of June, but 23 per cent higher than in September 2016.

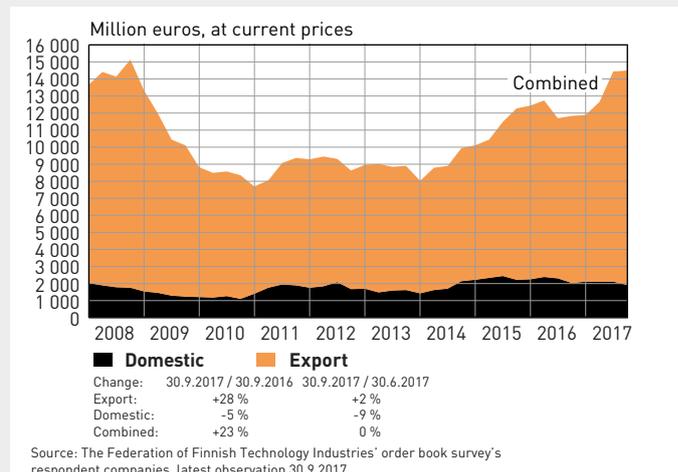
Judging from order trends in recent months, the turnover of mechanical engineering companies is expected to be higher during the rest of 2017 than in the corresponding period of last year.

The number of personnel in mechanical engineering companies in Finland increased in the January-September period from the 2016 average. At the end of September, the industry employed approximately 128,700 people. Personnel was up by some four per cent, or about 5,000 employees from the 2016 average.

Value of New Orders in the Mechanical Engineering in Finland



Value of Order Books in the Mechanical Engineering in Finland





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Metals Industry in Finland

Turnover growth to slow down towards the end of 2017

The turnover of metals industry companies (steel products, non-ferrous metals, castings and metallic minerals) in Finland between January and July was 26 per cent higher than twelve months earlier. In 2016, the turnover amounted to EUR 9 billion. In 2008, prior to the financial crisis, metals industry turnover in Finland totalled EUR 11.1 billion.

Some 85 per cent of the growth in the turnover of metals industry companies in 2017 is attributable to the rise in sales prices. This is due to the favourable development in world market prices of steel products and non-ferrous metals from early 2016. However, this trend has started to reverse in recent months.

Total production of steel products, non-ferrous metals, castings and metallic minerals in Finland between January and August increased by four per cent year-on-year. Production levels are more or less the same in comparison to the beginning of 2017. Production volumes of metallic minerals and castings in particular have increased in comparison to 2016. Production of steel products and

non-ferrous metals has increased less.

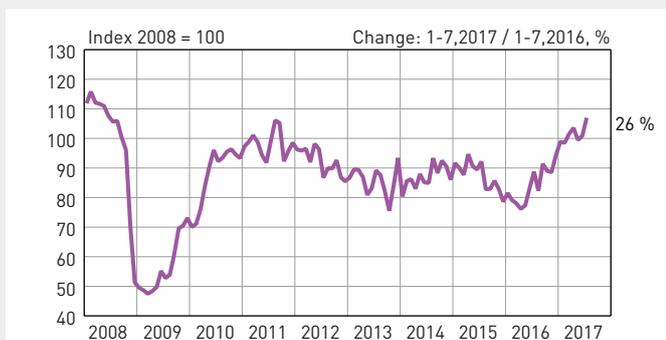
Global steel production was up almost six per cent in the January–September period from twelve months earlier. Production increased by four per cent in both the EU and North America and by six per cent in Asia

China, Japan, India, the United States, South Korea and Russia were the largest producers in September. China accounted for 51 per cent of global steel production.

Judging from order trends in recent months, the turnover of metals industry companies in Finland is expected to be higher during the rest of 2017 than in the corresponding period last year, but turnover growth will be significantly slower than in early 2017.

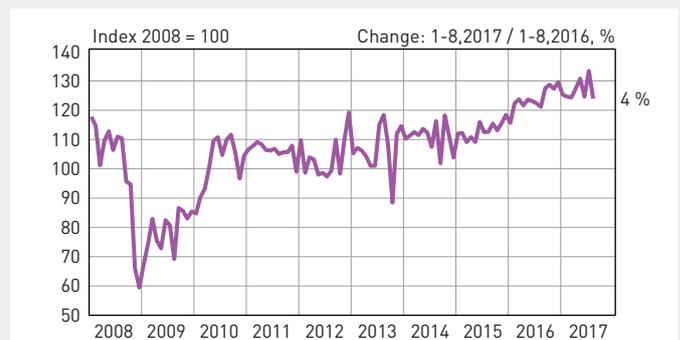
The number of personnel employed by metals industry companies in Finland declined slightly in the July–September period from the 2016 average. At the end of September, the industry employed approximately 15,100 people. Personnel was down by almost two per cent, or just under 300 employees from the 2016 average.

Turnover of the Metals Industry in Finland



Source: Macrobond, Statistics Finland
Latest information: July 2017

Production Volume of the Metals Industry in Finland



Source: Macrobond, Statistics Finland
Latest information: August 2017



Consulting Engineering in Finland

New orders fall

The turnover of consulting engineering companies (industrial, social and construction expert services) in Finland between January and July was 10 per cent higher than twelve months earlier. In 2016, the turnover amounted to EUR 5.8 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 5.5 billion.

The growth of new orders in consulting engineering has abated during the summer and early autumn. Substantial differences between individual companies have also emerged. In comparison to the April–June period, more companies saw a fall in orders than an increase. While the value of order books did not increase in the early autumn, total order books remain higher than in 2016.

The consulting engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books

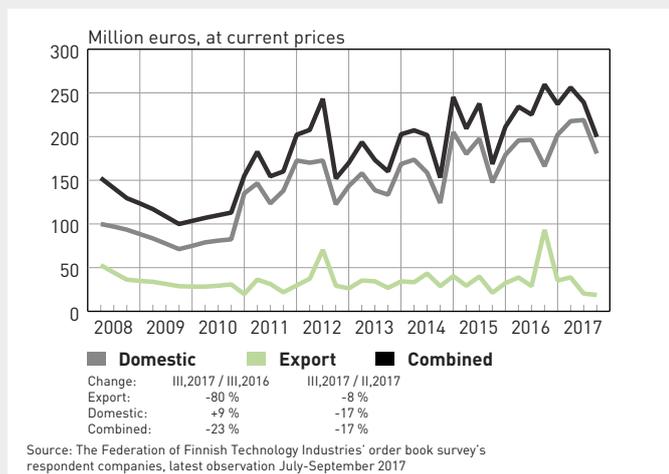
reported that the monetary value of new orders between July and September was 17 per cent lower than in the preceding quarter, and 23 per cent lower than in the corresponding period in 2016.

At the end of September, the value of order books was similar to that at the end of June, but seven per cent higher than in September 2016.

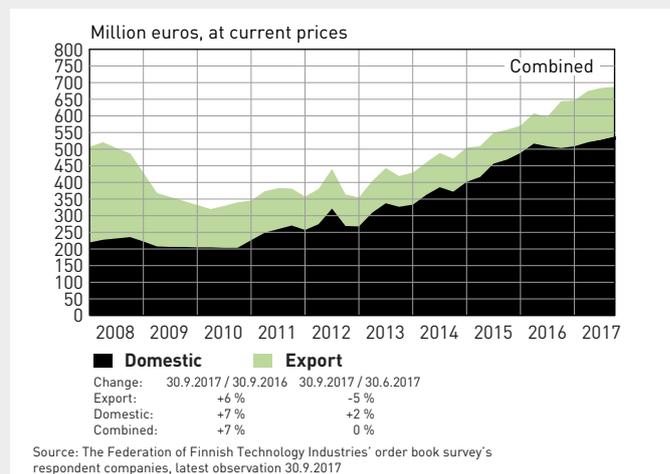
Judging from order trends in recent months, the turnover of consulting engineering companies is expected to be higher during the rest of 2017 than in the corresponding period last year.

The number of personnel in consulting engineering companies in Finland continued to grow in the January–September period from the 2016 average. At the end of September, the industry employed approximately 52,500 people. Personnel was up by some five per cent, or 2,500 employees from the 2016 average.

Value of New Orders in the Consulting Engineering in Finland



Value of Order Books in the Consulting Engineering in Finland





Information Technology in Finland

Uneven order trends continue between companies

The turnover of information technology companies (IT services and software) in Finland between January and July was nine per cent higher than twelve months earlier. In 2016, the turnover amounted to EUR 11.5 billion. In 2008, prior to the financial crisis, the industry turnover in Finland was EUR 6.7 billion.

Uneven order trends between individual information technology companies continued in the July–September period. The positive trend has continued in the sales of software, such as games, whereas sales of other services have developed less favourably. In comparison to the April–June period, more companies saw a fall in orders than an increase.

The information technology companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 11 per cent lower than in the preceding quarter

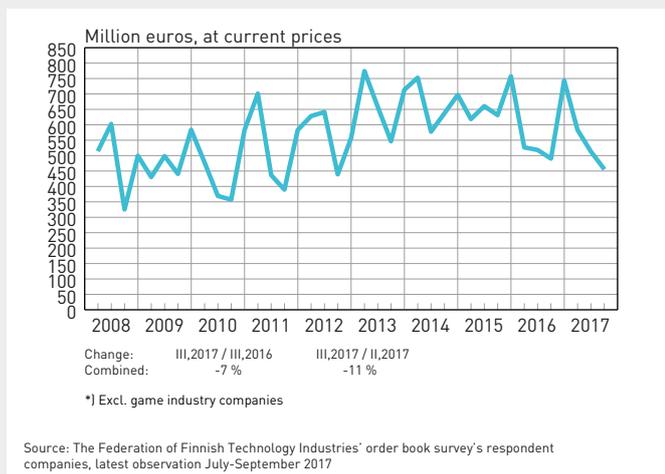
and seven per cent lower than in the corresponding period in 2016. Game industry companies are not included in the survey.

At the end of September, the value of order books was four per cent lower than at the end of June. Order books contracted by five per cent from September 2016.

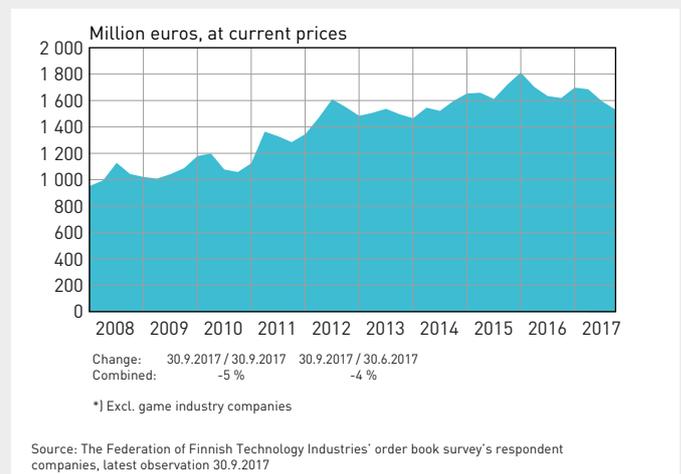
Judging from order trends in recent months and the positive development of the software industry in particular, the turnover of information technology companies is expected to be slightly higher during the rest of 2017 than in the corresponding period last year.

The number of personnel in information technology companies in Finland continued to grow in the January–September period from the 2016 average. At the end of September, the industry employed approximately 62,800 people. Personnel was up by some two per cent, or more than 1,000 employees from the 2016 average.

Value of New Orders in the Information Technology* in Finland



Value of Order Books in the Information Technology* in Finland



ECONOMIC OUTLOOK 4 | 2017

Information based on the situation on 25 October 2017

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Please visit the homepage of the Federation of Finnish Technology Industries for additional information on technology industry turnover, exports, investments, personnel and the development of producer prices: www.techind.fi.

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