

Economic Outlook

Technology Industries of Finland

4 | 2019

Global And Finnish Economic Outlook

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Uncertainty continues to rise, likelihood of economic downturn increases

Economic uncertainty has not diminished during the autumn. On the contrary, it is on the rise. The trade war between the United States and China accelerated sharply in the early autumn, shaking the international financial market. Things have calmed somewhat since then, and according to the latest news, it seems the parties are engaging in trench warfare of sorts.

In the Brexit process, steps have been taken towards a deal-based departure. However, the situation remains unclear. Moreover, the possible deal-based departure currently under discussion is only the starting point for actual Brexit negotiations, which means that Brexit-related uncertainty is likely to continue for years.

Geopolitical risks are also on the increase. The situation in Hong Kong remains unresolved, and Turkey's attack to the Kurdish regions in Syria is a challenge to international cooperation. In the United States, domestic political situation is explosive, which may give the country less room to manoeuvre also in terms of trade policy.

The International Monetary Fund IMF issued its latest world economic outlook in October, again revising down its global growth forecast for 2019 and 2020. Global growth is forecast at 3.0 percent for 2019 and 3.4 percent in 2020. According to the IMF, pick up in 2020 is due in particular to a projected improvement in economic performance in emerging markets. However, IMF also warns again about several downside risks, which could lead to a much more subdued pace of global activity.

The volume of global trade has failed to grow in more than eighteen months. Development has been weak in both emerging and advanced market economies. The trade war with its escalating tariffs and other trade restrictions and barriers has contributed significantly to the lack of growth.

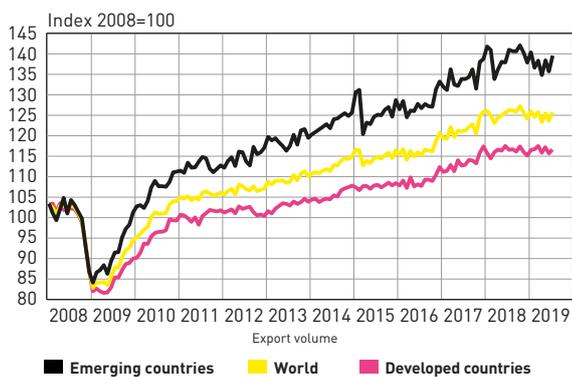
In the euro area, growth prospects have weakened further during the autumn. The manufacturing and service sectors' Purchase Managers' Indices imply that growth stalled in the euro area in September. The situation in German manufacturing in particular has become increasingly challenging during the autumn. The problems are starting to have an effect on the service sector, too.

In recent months, there was also some bad news from Sweden. The growth outlook of our Western neighbour has weakened notably and unemployment has also risen suddenly and significantly. The same factors weigh on the outlook in Sweden as in Finland: lower rate of global growth and overall uncertainty, which dampen the export outlook and thus the growth of the economy as a whole. Sweden, however, benefits from a weaker krona, which makes Swedish exports more competitive on the global market.

In the USA, economic growth has slowed down considerably. The economy is projected to expand by 2.3 per cent in 2019 and only 1.8 per cent in 2020. In 2018, the US economy expanded by 2.9 per cent. The outlook is particularly damp for manufacturing in 2019 and 2020. The latest reports indicate that manufacturing production in the USA in September was down year-on-year for the first time in three years.

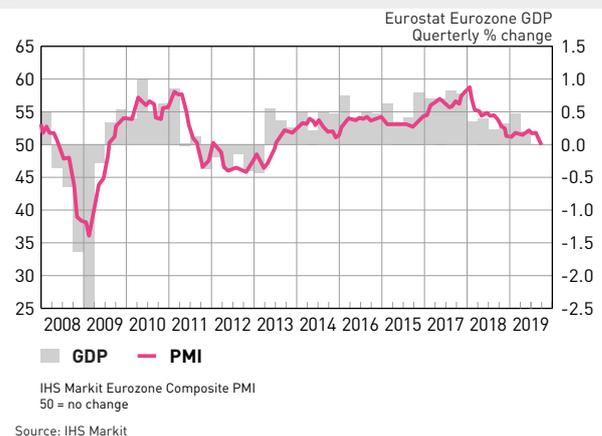
Overall, the risks impacting global economic growth have intensified as we move towards winter. The growth outlook would improve significantly if trade and geopolitical issues can be addressed with balanced and peaceful solutions that support free trade. Unfortunately, as we have learned from recent developments, it may be better not to expect too much from the negotiations.

Growth of World trade has been Stagnated Already for One and Half Years



Source: Macrobond, The CPB Netherlands Bureau for Economic Policy Analysis
Latest information: July 2019

Purchasing Managers' Index Indicates that Growth has Stopped in Eurozone



IHS Markit Eurozone Composite PMI
50 = no change
Source: IHS Markit

Finland's outlook becomes more bleak

As expected, Finland's outlook was revised down for this year and next in the autumn projection round. Growth is projected to slow down further in 2021. The current growth projection for the Finnish GDP in 2020 is 1.1 per cent.

According to the Research Institute of the Finnish Economy (ETLA), Finnish economy is almost 50 per cent likely to slip into technical recession before the end of 2020. An economy is considered to have entered into a technical recession if its total output has contracted in two consecutive quarters. There is considerable uncertainty in relation to the projected growth of some 1 per cent in 2020.

Employment situation has not improved in Finland since about one year ago. Weakened economic outlook makes the government's ambitious target of 75 per cent employment increasingly difficult to achieve.

Even at best, all indicators point to very modest economic growth in Finland in coming years. This is an untenable situation in terms of financing our welfare state.

Dampening growth puts focus on competitiveness

While the global economy affects the growth prospects of Finnish exporting industries, domestic decisions are just as crucial. The decisions we make have an effect on Finland's ability to maintain its competitive position in an environment where growth is slowing down.

The more competitive we are, the better our exporters can maintain their market shares and gain market share from competitors. Business performance is directly linked to the development of employment and financing of the welfare state.

The success of our export sector is essential for the Finnish economy as a whole. Statistics clearly indicate that exports are the engine of GDP growth in Finland. We have achieved sustainable economic growth only when our exports sector is thriving.

According to the Bank of Finland, cost-competitiveness has improved in recent years, but there is still room for improvement. We need to improve our competitiveness, which is the best way to support employment and manufacturing in Finland.

Downturn in German Manufacturing Industry Still Deepens



Economic Forecasts for Finland

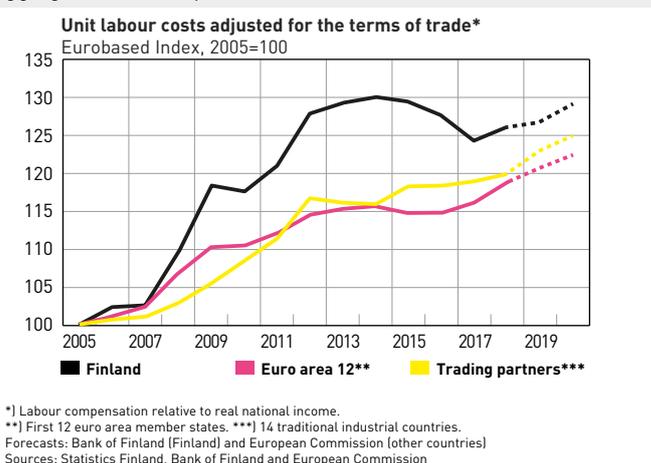
Forecaster	Date	Change in GDP, %			Change in private Consumption, %		Change in Exports, %		Change in Investments, %		Inflation, %*		Unemployment rate, %	
		2018	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Danske Bank	24.9.2019	1,7	1,2	0,8	0,8	1,0	3,5	1,5	0,5	0,6	1,1	1,4	6,6	6,6
Nordea	4.9.2019	1,7	1,2	1,0	1,0	1,4	3,0	1,0	0,5	0,1	1,1	1,3	6,4	6,4
OP-Pohjola	19.8.2019	1,7	1,2	0,5	1,0	0,8	2,0	0,8	1,5	0,6	1,0	1,1	6,5	6,5
Ministry of Finance	7.10.2019	1,7	1,5	1,0	1,7	1,4	2,4	2,4	0,4	-0,3	1,1	1,4	6,5	6,3
Bank of Finland	11.6.2019	2,3	1,6	1,5	1,3	1,4	2,8	2,1	1,8	1,6	1,2	1,3	6,5	6,4
ETLA	16.9.2019	1,7	1,1	0,9	0,7	1,1	3,8	1,3	1,4	0,8	1,1	1,1	6,5	6,3
PTT	12.9.2019	1,7	1,3	1,2	1,2	1,0	2,5	1,5	0,6	0,5	1,0	1,0	6,6	6,9
PT	17.9.2019	1,7	1,3	1,1	1,0	0,9	4,0	2,0	1,4	-1,0	1,1	1,0	6,6	6,7
European commission	27.2019	1,7	1,5	1,2	1,6	1,4	3,2	3,4	1,6	1,3	1,4	1,8	6,7	6,0
IMF	15.10.2019	1,7	1,2	1,5			3,1	2,2			1,2	1,3	6,5	6,4
Average		1,8	1,3	1,1	1,1	1,2	3,0	1,8	1,1	0,5	1,1	1,3	6,5	6,5

*] European commission and IMF report Harmonized Index of Consumer Prices Updated 23.10.2019

Growth of Finnish Economy and Performance of Export Sector Goes in Hand in Hand



Cost Competitiveness has Improved in Finland but We are Still Lagging Behind Competitors



Greater divergence between companies

The turnover of technology industry companies in Finland grew by 6 per cent in 2018 from 2017. In January-July 2019, their turnover was up 7 per cent year-on-year. Turnover was up in all main sectors except metals industry. In 2018, the turnover in Finland amounted to EUR 79 billion.

The effect of global economic uncertainty and weakening demand are increasingly apparent in Finnish technology industry. The rise in the value of technology industry companies' new orders in the third quarter is due to a few large orders. Without these, the value of new orders would have dropped notably from the previous quarter and order books would also have taken a turn for the worse. During the winter, development is likely to become even more uneven.

The weakened outlook also causes even greater divergence between individual companies. At the company level, almost two thirds of technology industry companies in the manufacturing sector reported that the monetary value of new orders in the third quarter was lower than in the preceding quarter.

The number of requests for tender received by technology industry companies dropped notably from the levels reported in the spring and summer. The balance figure that measures the level of tender requests was at its lowest level since the 2012 euro crisis. This indicates a clear deterioration of demand on the global market, which means that we can expect weaker order development in

the remainder of 2019 and the coming winter.

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 8 per cent higher than in the preceding quarter and 16 per cent higher than in the corresponding period in 2018.

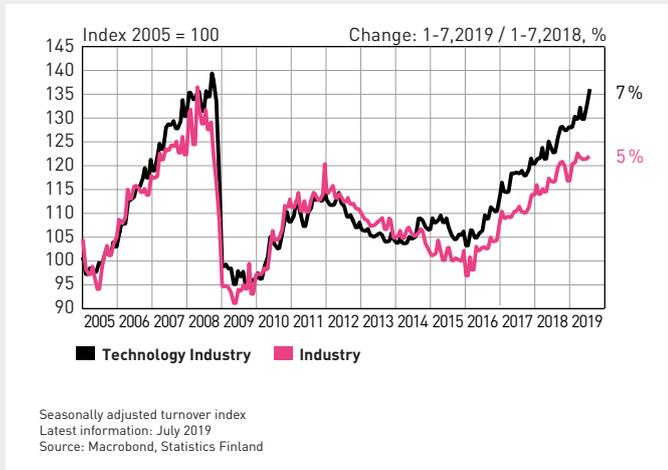
At the end of September, the value of order books was more or less the same as at the end of June, but 10 per cent higher than in September 2018. It is important to note that shipyards' share of the total value of books is exceptionally large. Roughly 60 per cent of the strengthening of the order books since early 2014 is attributable to ship orders.

Judging from order trends in recent months, the turnover of technology industry companies is expected to be slightly higher in the remainder of 2019 than in the corresponding period last year.

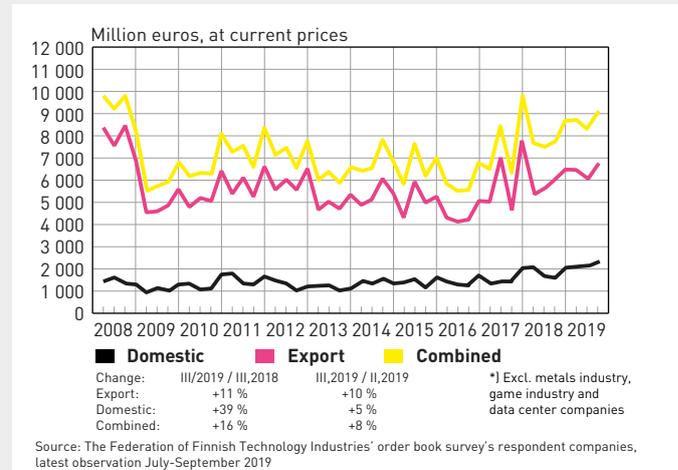
The number of personnel employed by technology industry companies in Finland was up 3.8 per cent from the 2018 average. At the end of September, the industry employed 320,700 people, approximately 11,600 more than the 2018 average.

Recruitment of new employees remained at a good level in the July-September period. In total, recruitments came to 9,400. Some companies were increasing their personnel, others were hiring new employees due to retirements and employee turnover.

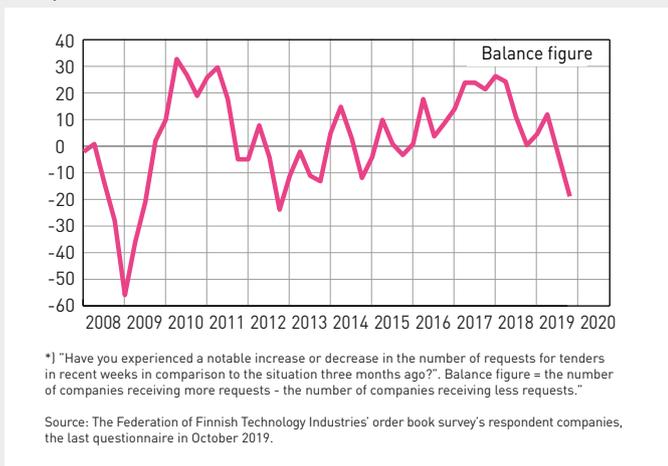
Turnover of Finnish Technology Industry was 79 billion Euros in Year 2018



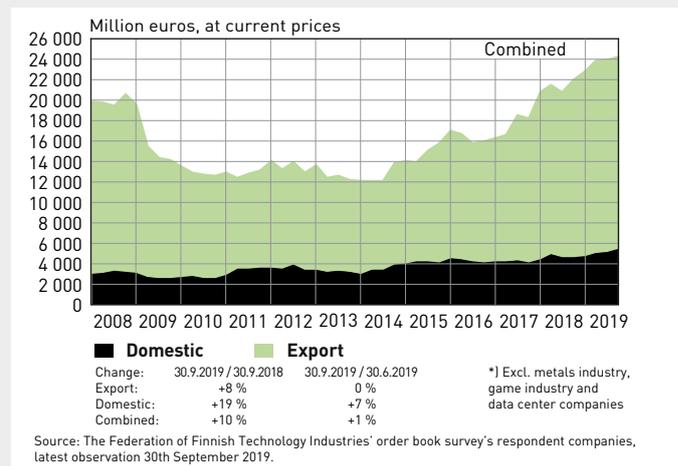
Value of New Orders in the Technology Industry* in Finland



Tender Requests* Received by the Technology Industry Companies in Finland



Value of Order Books in the Technology Industry* in Finland





Electronics and Electrotechnical Industry in Finland

New orders continue to rise

The turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland grew by approximately 4 per cent in 2018 from 2017. In January-July 2019, their turnover was up 14 per cent year-on-year. In 2018, their turnover in Finland amounted to EUR 15.6 billion.

Both new orders and order books continued to grow in the July-September period. The upward trend of orders has continued for almost three years now. However, differences between individual companies have become greater also in this sector.

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 19 per cent higher than in the

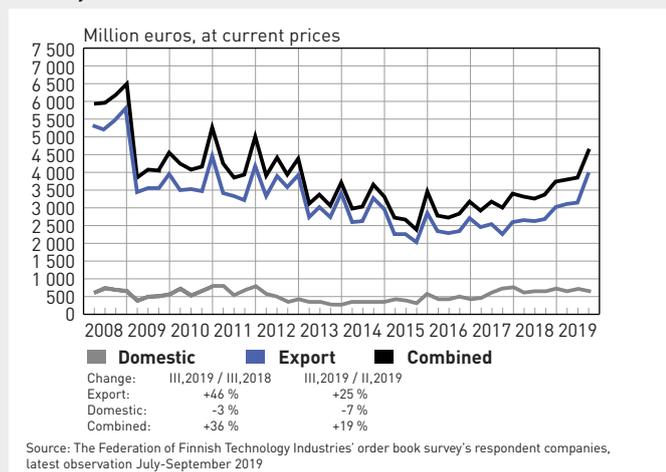
preceding quarter and 36 per cent higher than in the corresponding period in 2018.

At the end of September, the value of order books was 15 per cent higher than at the end of June and 27 per cent higher than in September 2018.

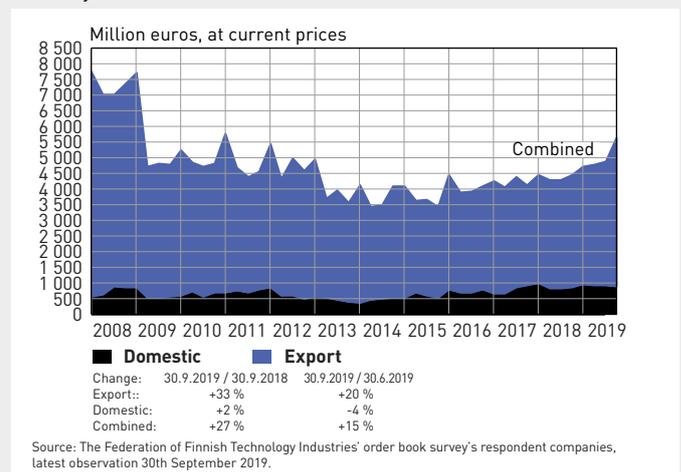
Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies is expected to be higher in the remainder of 2019 than in the corresponding period in 2018.

The number of personnel employed by electronics and electrotechnical companies in Finland was up almost 3 per cent from the 2018 average. At the end of September, the industry employed 39,000 people, approximately 1,100 more than the 2018 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

Downward trend continues for new export orders

The turnover of mechanical engineering companies (machinery, metal products and vehicles) in Finland increased by 6 per cent in 2018 from 2017. In January-July 2019, their turnover was up 5 per cent year-on-year. In 2018, the turnover in Finland amounted to EUR 31.9 billion.

The value of new orders in mechanical engineering was up 5 percent from the previous quarter in the July-September period. While the total value of new orders continued to grow, the weakened economic outlook is reflected in particular in the number of export orders, which dropped notably. The monetary value of export orders between July and September in mechanical engineering was 7 per cent lower than in the preceding quarter and almost 20 per cent lower than in the corresponding period in 2018.

The total value of order books remained more or less at the same level as in the previous quarter. Shipyards' share of the total value of order books is exceptionally large. Some 75 per cent of the strengthening of the order books since early 2014 is attributable to ship orders. The last ship in the shipyards' order books is expected to be delivered in 2028. The strengthening of

the ship building industry drives broad-based growth in many sectors.

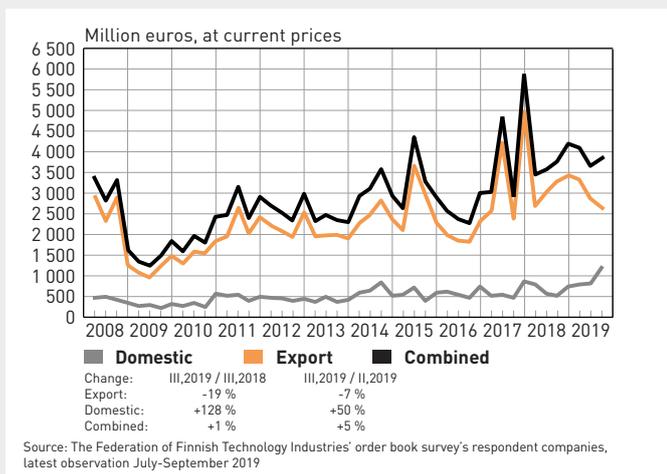
The mechanical engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 5 per cent higher than in the preceding quarter and more or less the same as in the corresponding period in 2018.

At the end of September, the value of order books was at the same level as at the end of June and 6 per cent higher than in September 2018.

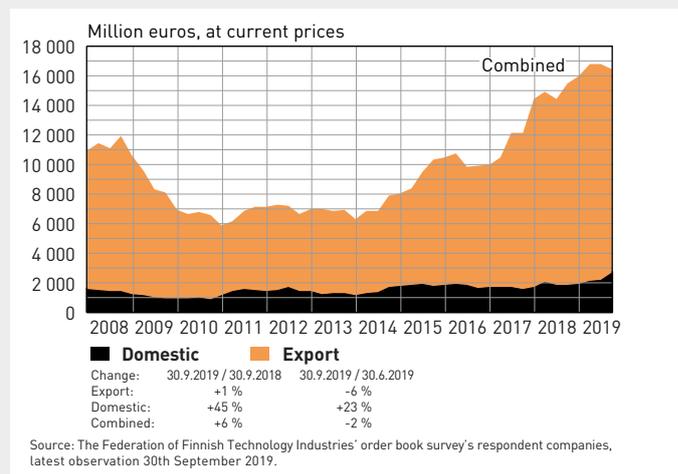
Judging from order trends in recent months, the turnover of mechanical engineering companies in the remainder of 2019 is expected to be slightly higher than or the same as in the corresponding period last year.

The number of personnel employed by mechanical engineering companies in Finland was up some 2.6 per cent from the 2018 average. At the end of September, the industry employed 134,800 people, approximately 3,500 more than the 2018 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 and production volume continue to drop

The turnover of metals industry companies (steel products, non-ferrous metals, castings and metallic minerals) in Finland grew almost 10 per cent in 2018 from 2017. However, the turnover fell towards the end of 2018. In January-July 2019, turnover was 5 per cent lower than twelve months earlier. In 2018, the turnover in Finland amounted to EUR 11.2 billion.

The total production of steel products, non-ferrous metals, castings and metallic minerals in Finland in the January-July period decreased by as much as 10 per cent year-on-year.

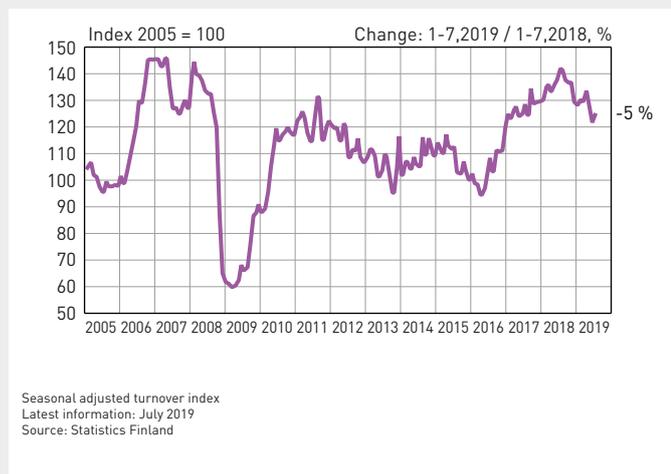
At the end of September, the number of personnel employed by metals industry companies in Finland was close to the 2018 average as the industry employed approximately 15,900 people.

In comparison to the corresponding period in 2018, global steel production increased by more than 4 per cent between

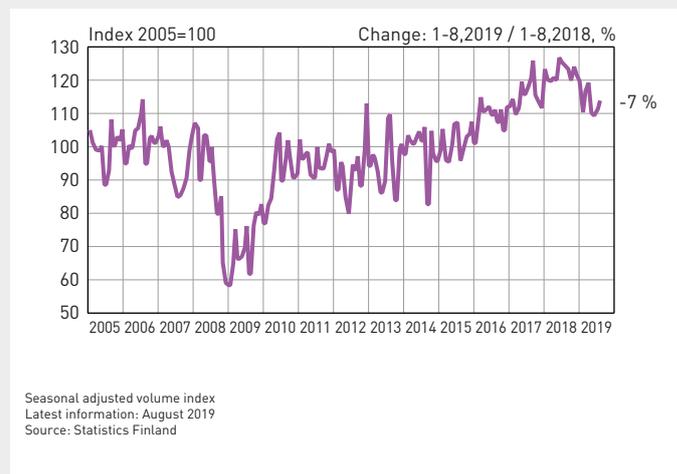
January and August. Production increased by 7 per cent in Asia and by more than 4 per cent in the United States. Production in Europe decreased by almost 3 per cent. Many countries are feeling the effects of the trade war and economic sanctions. In early 2019, production fell slightly in Russia while dropping more than 10 per cent in Turkey and 5 per cent in Canada and almost 4 per cent in Japan.

China, India, Japan, the United States, South Korea and Russia were the largest producers in August. China accounted for 56 per cent of global steel production.

Turnover of the Metals Industry in Finland



Production Volume of the Metals Industry in Finland





Consulting Engineering in Finland

Order books shrinking

The turnover of consulting engineering companies (industrial, social and construction expert services) in Finland grew by 6 per cent in 2018 from 2017. In January-July 2019, their turnover was up 5 per cent year-on-year. In 2018, the turnover in Finland amounted to EUR 6.3 billion.

While new orders and order book volumes fell slightly from the previous quarter, they nevertheless remain at a good level.

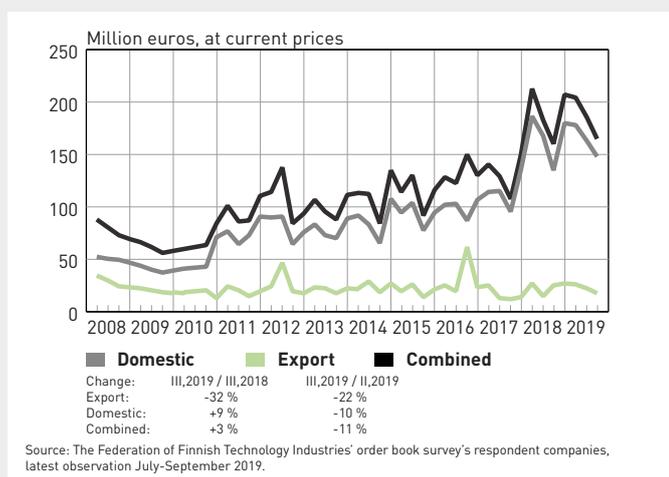
The consulting engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 11 per cent lower than in the preceding quarter, but 3 per cent higher than in the corresponding period in 2018.

At the end of September, the value of order books was 3 per cent lower than at the end of June and 11 per cent lower than in September 2018.

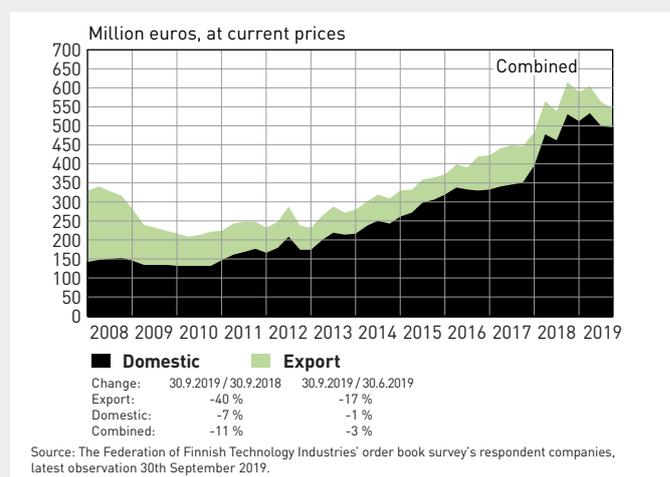
Judging from order trends in recent months, the turnover of consulting engineering companies is expected to be slightly higher in the remainder of 2019 than in the corresponding period last year.

The number of personnel employed by consulting engineering companies in Finland was up some 6.6 per cent from the 2018 average. At the end of September, the industry employed 56,800 people, approximately 3,500 more than the 2018 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

Notable drop in new orders

The turnover of information technology companies (IT services and software) in Finland grew by 4 per cent in 2018 from 2017. In January-April 2019, their turnover was up 10 per cent year-on-year. In 2018, the turnover in Finland amounted to EUR 13.5 billion.

New orders dropped notably from the previous quarter in the July-September period, but order books remained at a good level. Typically for the sector, order volumes fluctuate strongly from one quarter to another.

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 37 per cent lower than in the preceding quarter, and roughly the same as in the corresponding period in

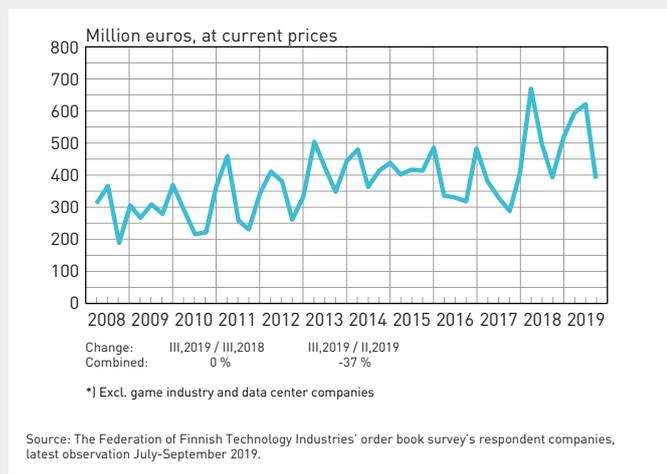
2018. Game industry and data centre companies are not included in the survey.

At the end of September, the value of order books was 3 per cent lower than at the end of June and 9 per cent higher than in September 2018.

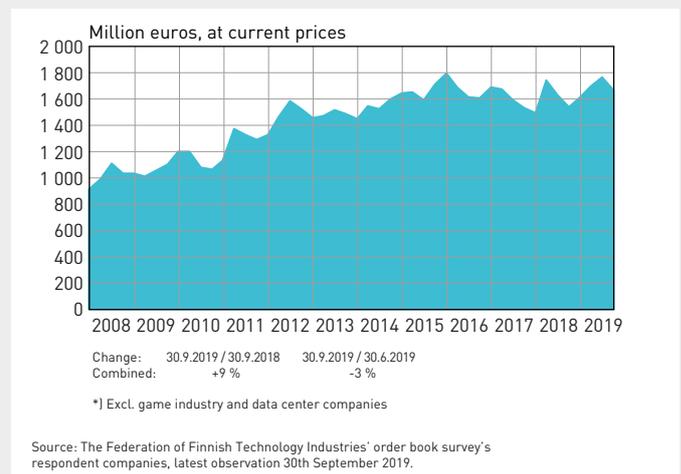
Judging from order trends in recent months, the turnover of information technology companies is expected to be higher in the remainder of 2019 than in the corresponding period last year.

The number of personnel employed by information technology companies in Finland was up some 5 per cent from the 2018 average. At the end of September, the industry employed 74,200 people, 3,500 more than the 2018 average.

Value of New Orders in the Information Technology* in Finland



Value of Order Books in the Information Technology* in Finland



ECONOMIC OUTLOOK 4 | 2019

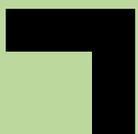
Information based on the situation on 23 October 2019

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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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