

### Industrial Production Status

Indicators	2016	2017						2018								
%YoY	Year	Aug.	Sep.	Oct.	Nov.	Dec.	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Year(f)
MPI*	1.4	5.6	5.3	1.0	6.3	5.8	2.5	4.7	4.6	3.2	3.1	2.9	5.0	4.9	0.7	3.0

\* MPis have been adjusted for 2018 under ISIC Rev.4 classifications which cover 21 divisions, 57 industrial groups and 235 products. The industrial index was formed using the Laspeyres formula based on the 2011 fixed weights, with added value and output value referenced from “The 2012 Business Trade and Industry Census: The Manufacturing Industry” produced by the National Statistical Office of Thailand. Furthermore, the weights of weighted value have been adjusted with added value to reflect the current industrial structure.

The industrial economics status in **August 2018** remained on the rise for sixteen consecutive months since May 2017. **The manufacturing production index (MPI) increased** by 0.7 percent from the same period last year, a result from the growth of exports consistent with the global economic status. The exports of industrial product in August 2018 grew by 5.8 percent.

When considering the MPI for the past 3 months (May, June, and July) compared to last year (%YoY), the trend of industrial production continued to grow and the rate of change was 2.9 percent, 5.0 percent and 4.9 percent respectively. As a result, MPI grew by 3.6 percent in the first eight months of this year, a significant improvement compared to the first eight months in 2017 whereby the MPI grew at an average of 1.5 percent. The increase of MPI reflected a stronger and more stable growth of the industrial sector.

Indicators	2017					2018							
%MoM	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.
MPI	4.4	1.6	-5.0	6.5	-3.2	5.0	-0.1	10.5	-20.9	14.7	-1.1	-2.8	0.1

The change rate of MPI (%MoM) for the past three months (May, June, and July) was normal which was at 14.7 percent, -1.1 percent, and -2.8 percent respectively. This was according to seasonal changes throughout the year as the MPI of June and July decreased after most factories accelerated the production in May to compensated the production loss during the Songkran festivities in April.

Key industries that contributed to the MPI growth in August 2018 were:

- Sugar: Production grew by 91.1 percent from increased sugarcane yield this year, resulting in more transformation of raw sugar into white and refined sugar than last year.

➤ Electronic Parts: Production grew by 12.4 percent in line with growth in demand from the global electronics market in all product categories, especially PCBA (printed circuit board assembly) and IC (integrated circuits).

➤ Air Conditioners: Production grew by 32.3 percent from the development of high-tech products to expand the domestic consumer base and from increased exports to be installed in various buildings to support the Olympic Games in Japan.

➤ Petroleum Refinery: Production grew by 7.4 percent in line with economic growth, resulting in higher demand transportation fuel, especially in gasohol 95, diesel oil and jet fuel.

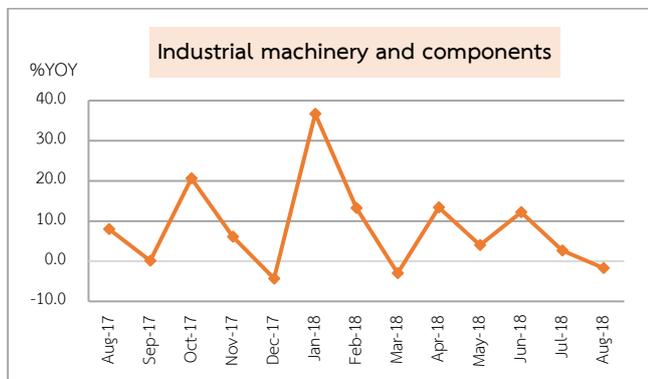
➤ Pharmaceuticals: Production grew by 20.0 percent due to lower than usual production from the shutdown of some manufacturers in August of last year for maintenance. At the same time, new machines have been added to some manufacturers since October 2017.

Regarding forecasts, **the MPI for 2018 is expected to grow at an average of 3.0 percent** (in 2017 growth was 2.5 percent). Supporting factors are the global economic growth causing exports and the manufacturing sector to grow in a good range. This is coupled with public spending and investment which is tended to rise in line with disbursements and progress of government investment projects, including a clear recovery in private investment as a result of improved confidence in the business sector and improvement in the industry capacity utilization rate. In the first eight months of 2018, the capacity utilization rate averaged at 68.74 percent, a good growth from the first eight months of 2017 which averaged 66.88 percent.

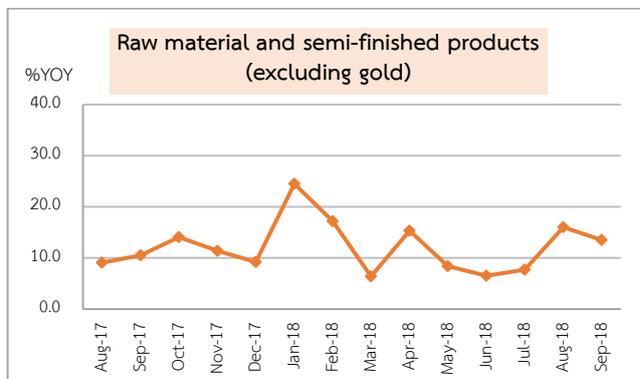
# Other Industrial Economic Indicators in August 2018

## Other Industrial Economic Indicators in August 2018

### Thailand's Industrial Sector Importation



Source: Ministry of Commerce

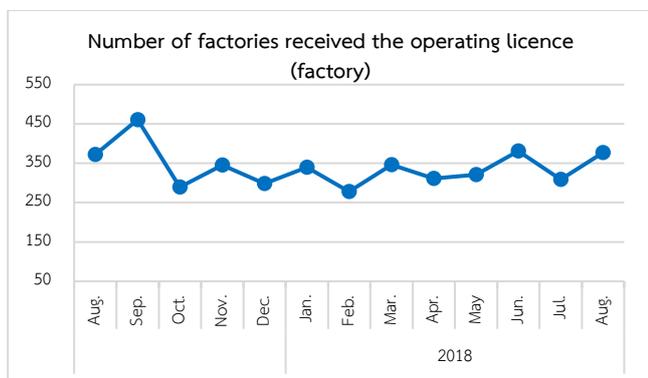


Source: Ministry of Commerce

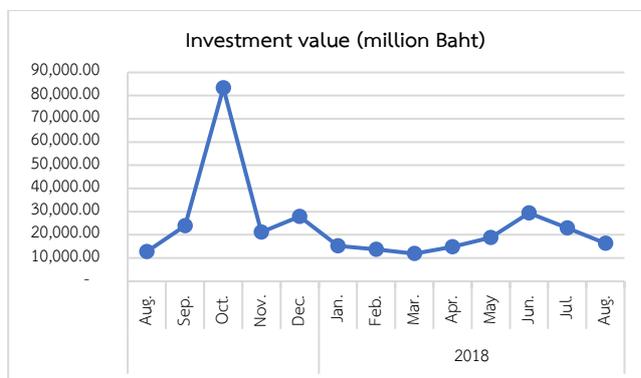
**-** The import value of industrial machinery and components in August 2018 was 1,548.3 million USD, decreased by 1.7 percent compared to the same month last year, from the imports of air and liquid pumps, jet turbine and parts thereof, and printing machineries.

**+** The import value of raw material and semi-finished products (excluding gold) in August 2018 was 8,247.4 million USD, a 16.0 percent growth compared to the same month last year, in line with the import of chemicals, equipment and parts of the electrical appliance and electronics, including iron, steel and products thereof.

## ■ Status of Industrial Operations



Source: Department of Industrial Works



Source: Department of Industrial Works

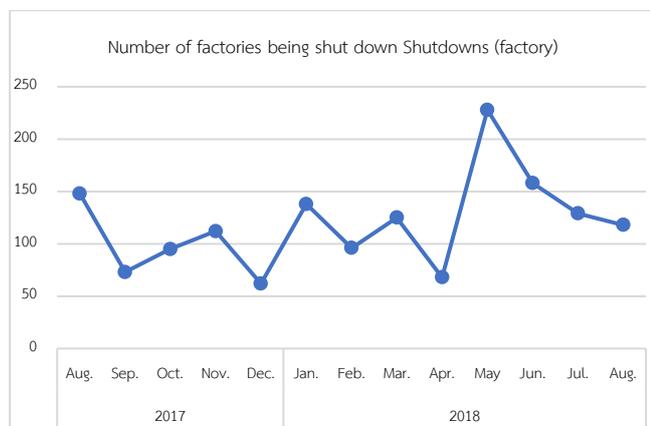
⊕ A total of 377 factories were licensed to operate in August 2018. The number increased by 22.0 percent from July 2018 (%MoM) and a 1.3 percent increase compared with the same month last year (%YoY).

⊕ The total value of investment from the licensed factories for operation in August 2018 was 16,373.9 million Baht, a 28.6 percent decrease from July 2018 (%MoM) but a 28.0 percent increase compared with the same month last year (%YoY).

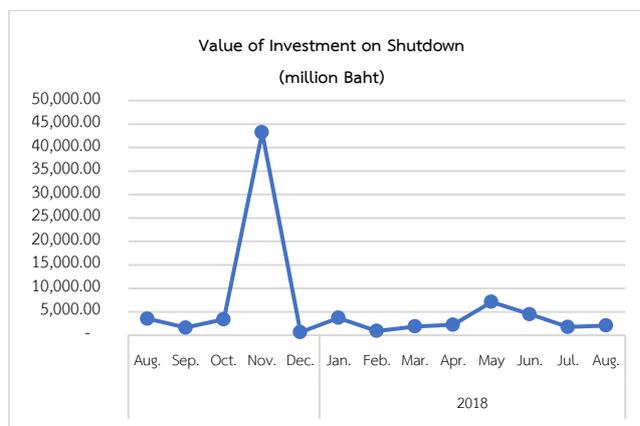
*“The industry with the highest number of licensed factories commencing the business in August 2018 was automobile repairing industry (26 factories), followed by the gravel/sand/clay digging and epilation industry (24 factories).”*

*“The industry with the highest value of investment in August 2018 was the flour production industry valued at 2,632.8 million Baht, followed by the production of thermal electricity industry valued at 1,156 million Baht.”*

■ Status of Industrial Operations (cont.)



Source: Department of Industrial Works



Source: Department of Industrial Works

➖ A total of 118 factories shut down the operation in August 2018. The number decreased by 8.5 percent from July 2018 (%MoM) and a 20.3 percent from the same month last year (%YoY).

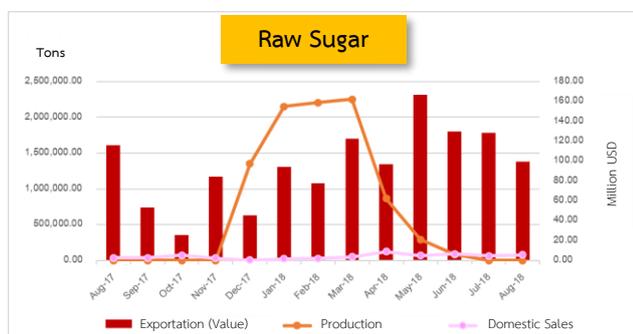
➕ The lost investment value on shutdowns in August 2018 equated to 2,059.9 million Baht, a 17.0 percent increase from July 2018 (%MoM), but a 41.5 percent drop from the same month last year (%YoY).

*“In August 2018, the industry with the highest number of factories being shut down were the wooden furniture and decorations industry (9 factories) and the gravel/sand/clay digging and epilation industry (8 factories).”*

*“The shutdown of the industry with the highest value of the investment in August 2018 was the drinking water industry valued at 560 million Baht, followed by the concrete product manufacturing and gypsum-mixed concrete product manufacturing, valued at 272 million Baht.”*

## Industrial Economic Status for August 2018 by Industry

### 1. Food Industry

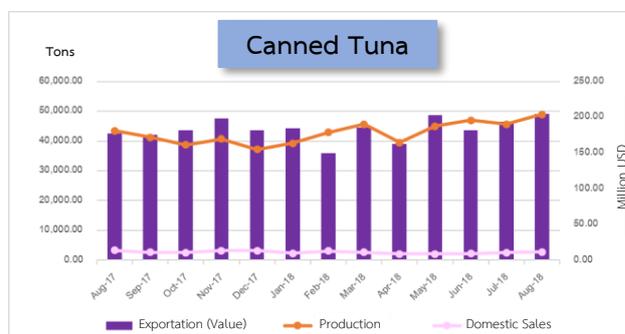


Source: Office of Industrial Economics and the Ministry of Commerce

**+** **Production** of food product in August 2018 increased by 13.2 percent (%YoY), classified as follows:

1) Export-orientated products namely, sugar increased by 90.8 percent (tons-%YoY) to support the dissolution of raw sugar for transformation into white and pure white sugar which increased significantly from a 40-45 percent growth in sugarcane yield from last year. This was coupled with canned tuna production which grew by 12.7 percent (%YoY) from pressure easing on raw material prices and the price of commodities, resulted in more purchase orders from trade partners.

2) Domestic market-orientated products namely, ready-to-drink milk and fresh and frozen chicken increased by 11.4 percent and 0.6 percent (%YoY) respectively from the result of the continuous increase in consumer demand.



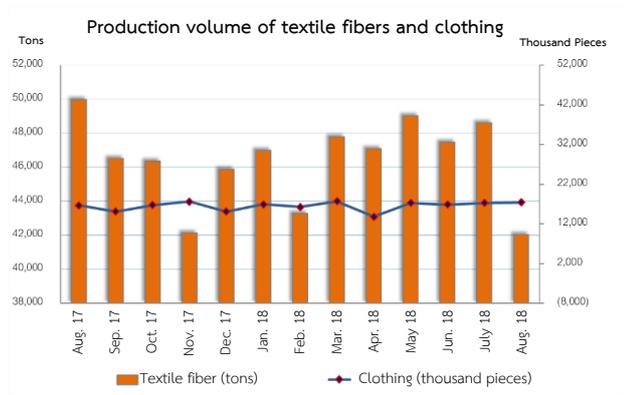
Source: Office of Industrial Economics and the Ministry of Commerce

**+** **Domestic market:** Domestic sales volumes of food products in August 2018 grew by 9.1 percent (%YoY), resulting from a positive economic trend.

**+** **Export markets:** The export value of food products in August 2018 increased by 6.0 percent (%YoY) in almost products such as white rice, tapioca flour, canned sardine, jasmine rice, fresh and frozen chicken, canned tuna, processed chicken, and canned pineapple which increased by 125.9 percent, 61.2 percent, 37.3 percent, 21.4 percent, 19.5 percent, 13.4 percent, 9.0 percent, and 5.6 percent respectively (%YoY) due to the global demand for commodities that grew following the global economic recovery.

**+** **Trend forecast:** It is expected that the production and export value in the food industry in September 2018 will increase due to opportunities to expand exports to China in replacement of US products including shrimp, chilled and frozen chicken, processed pork and cassava products. It is expected that China will import less of these products from the US due to increased taxes to counter trade measures. This also includes rice products (white and jasmine rice) which partner countries have increased demand for. Furthermore, positive factors from the government's agriculture and base economy supporting policies help to boost the Thai economy to grow continuously and higher than expected.

## 2. Textile and Garment Industry



Source: Office of Industrial Economics

### Production

**-** *Textile fibers and fabrics* dropped by 15.89 percent and 9.08 percent (%YoY), partially because large manufacturers of textile fibers and fabrics stopped some production lines for maintenance. However, the manufacturers planned production of sufficient inventory to support export.

**+** *Apparel* increased by 4.26 percent (%YoY) from a growth in men’s wear made from synthetic fibers, in line with increased overseas orders.

### Domestic sales

**+** *Textile fibers* grew by 1.18 percent (%YoY) in synthetic fibers used as raw material to produce apparel for export.

**+** *Fabrics and apparel* decreased by 3.37 percent and 5.70 percent (%YoY), partially because some consumers showed interest in cheaper fashion clothes from China and Vietnam, including luxury brand clothes.



Source: Ministry of Commerce

### Exports

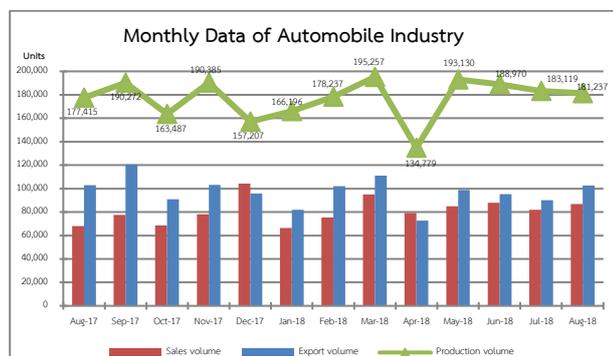
**+** *Textile fibers, fabrics and apparels* increased in value by 2.62 percent, 4.38 percent, and 13.92 percent respectively (%YoY), whereby textile fibers grew for twenty-two consecutive months from November 2016. Key export products were synthetic fibers and fabrics which are made from fibers with special properties, whereby Thailand has the potential for both production and export. Key export markets of Textile fibers and fabrics were Vietnam, Myanmar, Bangladesh, and Cambodia.

### Forecast for September 2018

**+** Trends in *textiles fiber and apparel production* are expected to grow in line with exports, mainly in the specialty fiber segment, including apparel made of synthetic fibers such as sportswear. However, fabrics may have less production and slowed exports among cotton products which Thailand has no raw materials for, coupled with less domestic demand.

### 3. Automotive Industry

#### ■ Automobile Production Industry



Source: Office of Industrial Economics; data collected from Automotive Division, Federation of Thai Industries

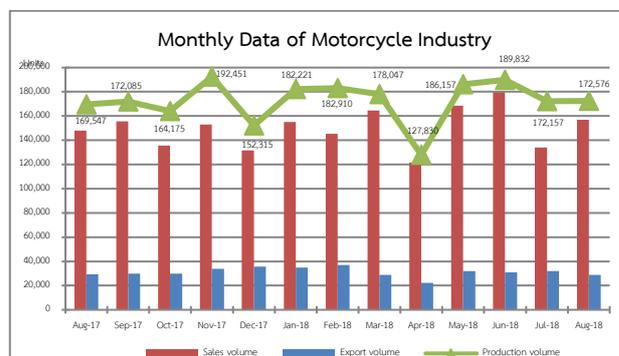
**+** **Automobile production** in August 2018 reached 181,237 units, a 1.03 percent decrease from July 2018 (%MoM) but a 2.15 percent increase from the same month last year (%YoY), as a result from the increase in production of passenger cars; 1-ton pickup trucks and derivatives; and commercial vehicles. Automobile production increased for fourteen consecutive months compared to the same period last year.

**+** **Domestic sales of automobiles** in August 2018 reached 86,814 units, a 5.94 percent growth from July 2018 (%MoM) and 27.3 percent from the same month last year (%YoY) with the increase in sales of passenger cars, 1-ton pickup trucks, commercial vehicles and PPV cars combined with SUVs, due to the expansion of public and private investment, productivity of agricultural products and the construction of state-owned and private enterprises.

**+** **Automobile exports** in August 2018 reached 102,513 units, a 13.71 percent increase from July 2018 (%MoM) but a 0.38 percent drop from the same month last year (%YoY). Exports of automobiles decreased in Oceania, North America, and Central and South America.

“In September 2018, the trend of the automobile industry is expected to increase compared to September 2017 resulting from the expansion of domestic economy.”

#### ■ Motorcycle Production Industry



Source: Office of Industrial Economics; data collected from Automotive Division, Federation of Thai Industries

**+** **Motorcycle production** in August 2018 reached 172,576 units, a 0.24 percent increase from July 2018 (%MoM) and a 1.79 percent increase from the same month last year (%YoY). The increase resulted from growth in production of multi-purpose motorcycles.

**+** **Sales of motorcycles** in August 2018 reached 156,866 units, a 17.03 percent growth from July 2018 (%MoM) and 6.05 percent from the same month last year (%YoY), from increased sales of motorcycles in the 51-110 CC., 126-250 CC. and 251-399 CC. categories.

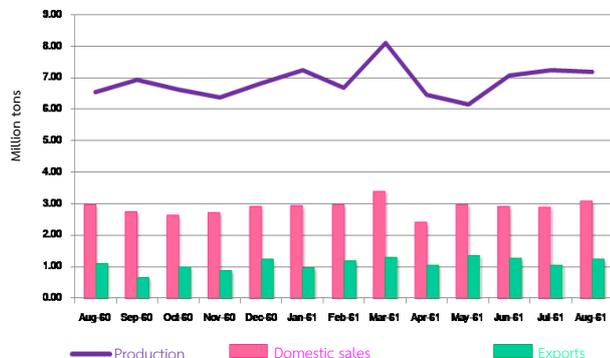
**-** **Exports of motorcycles** in August 2018 reached 28,940 units, a 9.40 percent drop from July 2018 (%MoM) and 1.59 percent from the same month last year (%YoY), as export markets in US, UK and Netherlands slowed down.

“In September 2018, the trend of the motorcycle production industry is expected to grow compared to September 2017.”

## 4. Cement Industry

### Overall Cement Industry

Volume of Cement Production, Domestic Sales, and Exports



Source: 1. Domestic production and sales volume: Division of Industrial Economics Information and Indices, Office of Industrial Economics

2. Export volume: Information and Communication Technology Center, Office of the Permanent Secretary, Ministry of Commerce.



**Total cement production** in August 2018 reached 7.18 million tons, a small drop by 0.99 percent from July 2018 (%MoM) but a rise by 9.82 percent compared to the same month last year (%YoY) to support growth in construction of public utilities.



**Overall domestic cement sales** in August 2018 reached 3.08 million tons, a 6.35 percent increase from July 2018 (%MoM) and a 3.68 percent growth compared to the same month last year (%YoY) from continued progress in construction of public utilities and expanded construction in the private sector.



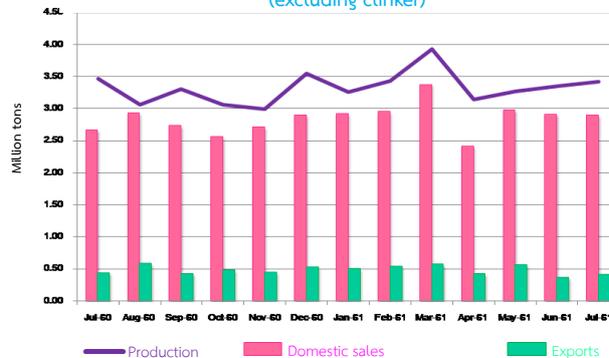
**Total cement exports** in August 2018 reached 1.26 million tons, an 18.64 percent increase from July 2018 (%MoM) and a 12.77 percent growth compared to the same month last year (%YoY) from increased orders by key markets such as the Philippines and China.



The trend of the overall cement industry in September 2018 is expected to slow down from rain in the monsoon season.

### Cement Industry (excluding clinker)

Volume of Cement Production, Domestic Sales, and Exports (excluding clinker)



Source: 1. Domestic production and sales volume: Division of Industrial Economics Information and Indices, Office of Industrial Economics

2. Export volume: Information and Communication Technology Center, Office of the Permanent Secretary, Ministry of Commerce.



**Cement production (excluding clinker)** in August 2018 reached 3.33 million tons, a 2.44 percent decrease from July 2018 (%MoM) but an 8.70 percent increase from the same month last year (%YoY).



**Domestic sales of cement (excluding clinker)** in August 2018 reached 3.08 million tons, a 6.35 percent growth from July 2018 (%MoM) and 4.95 percent compared to the same month last year (%YoY) in line with progress of public utilities and private real estate construction.



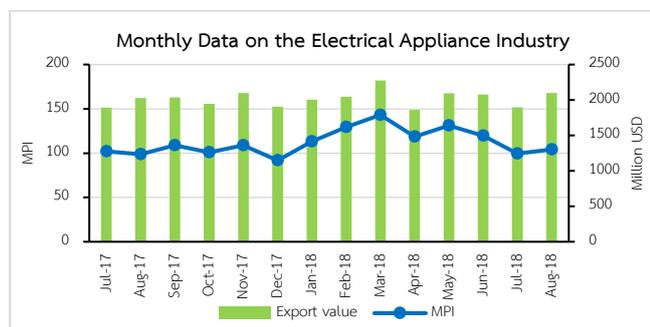
**Export of cement (excluding clinker)** in August 2018 reached 0.35 million tons, a 13.88 percent drop from July 2018 (%MoM) and 39.79 percent compared to the same month last year (%YoY), as a result of less orders from key export markets, particularly Sri Lanka which had no purchase orders this month, followed by the Philippines and Cambodia which dropped orders by 93.50 percent and 33.99 percent, respectively.



The trend of the overall cement industry (excluding clinker) in September 2018 is expected to continue growth slightly, due to rain in the monsoon season.

## 5. Electrical and Electronics Industry

### ■ Electrical Industry



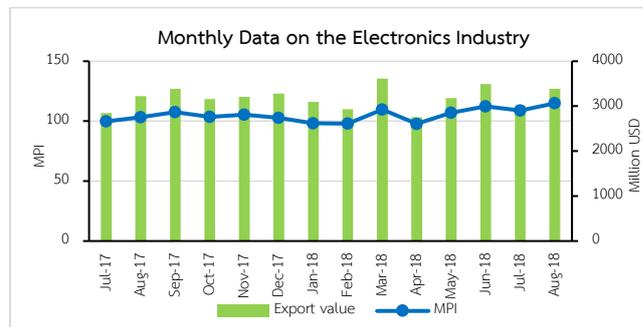
Source: Office of Industrial Economics

**+** **Production of electrical appliances** reached a production index of 104.1, a growth by 5.4 percent compared to same month last year. Products which increased in production were air conditioners, compressors, and electric motors by 32.9 percent, 9.9 percent and 5.1 percent respectively. Air conditioners increased from more overseas orders, especially from Indonesia, Japan and Australia which grew by 88.6 percent, 45.6 percent and 24.1 percent, as businesses sourced new markets to replace the Turkish market from tax measures on air conditioners. Compressors and electric motors on the other hand had more domestic sales. Products that decreased in production were kettles, electrical wiring, rice cookers, microwaves, washing machines, refrigerators and household fans by 29.2 percent, 17.7 percent, 15.2 percent, 14.7 percent, 12.0 percent, 11.9 percent and 2.8 percent respectively. Rice cookers, kettles, fans and electric wiring decreased in production due to less domestic demand, and therefore existing inventory was used for sales. Refrigerators, microwaves and washing machines on the other hand had less overseas orders.

**+** **Exports of electrical appliances** reached an export value 2,099.8 million USD, a 3.6 percent increase compared to the same month last year from a growth in key markets including China, ASEAN, EU and Japan. Key products such as the export value of air conditioners and parts, switch and control panels and electrical circuit breakers and components. reached 407.4 million USD, 178.5 million USD and 161.0 million USD, a 31.3 percent, 8.9 percent and 12.2 percent increase from last year. On the other hand, the export value for refrigerators and washing machines were 123.1 million USD and 122.7 million USD, a drop by 21.9 percent and 1.3 percent respectively, whereby dropping in the US market by 13.6 percent.

*“The manufacturing production index of September 2018 is forecasted to increase slightly by 2.5 percent compared to the same period last year. The increase is from air conditioners with higher purchase orders from overseas such as ASEAN and EU.”*

### ■ Electronics Industry



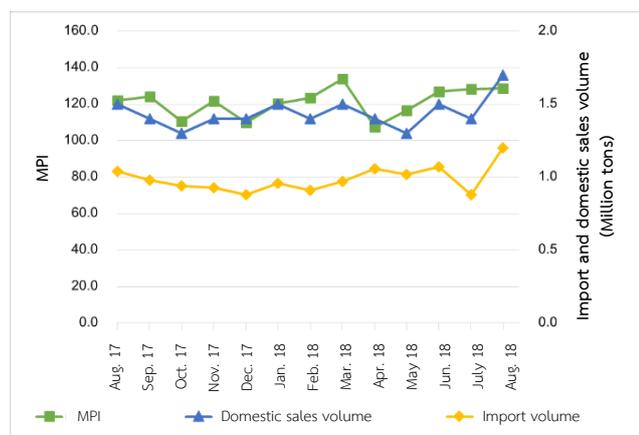
Source: Office of Industrial Economics

**+** **Production of electronics** reached a production index of 114.9, a growth by 11.2 percent compared to same month last year. Product groups which increased were monolithic IC, PCBA, printers, other ICs, HDDs and semiconductor devices transistor 20.2 percent, 15.7 percent, 14.3 percent, 10.5 percent, 6.2 percent and 2.6 percent respectively, in line with growth in global electronic products and use in the digital, robotics and automation industries. Production of ICs grew in particular as it is a key component of advanced technological products, including smart phones and tablets, whereas HDDs were developed for more storage capacity in cloud storage. Furthermore, semiconductors in the markets were developed for use in smart appliances such as watches, LED screens and photo sensors on cameras.

**+** **Exports of electronics** reached a value of 3,386.6 million USD, a 5.0 percent growth compared to the same month last year from a growth in almost all key markets including Japan, ASEAN, EU and US. Electronics with the highest export value were computer components and accessories, printed circuits and telephones and accessories at 1,350.7 million USD, 137.7 million USD and 120.9 million USD, an increase by 2.8 percent, 10.0 percent and 16.3 percent respectively. On the other hand, the export value of ICs dropped by 0.5 percent to 750.0 million USD, whereby the Chinese market shrank by 49.5 percent.

*“The manufacturing production index for electronics in September 2018 is expected to increase by 3.1 percent compared to the same month last year, from exports of computer parts and equipment thereof, ICs, telephones and equipment thereof which have grown consistently.”*

## 6. Iron and Steel Industry



Source: Office of Industrial Economics; Iron and Steel Institute of Thailand

**+** The manufacturing production index in August 2018 reached 128.8, a 5.6 percent increase compared to the same period last year. Analyzed by key products that were flat and long-formed steel, it was found that flat steel grew by 10.9 percent from a 29.5 percent increase in chromium-plated sheets due to increased purchase orders from the canned food industry especially canned pineapple and sardine. This was followed by galvanized steel sheet, cold-rolled steel and hot-rolled steel sheets which grew by 19.2 percent, 13.1 percent and 7.9 percent respectively. Long-formed steel products dropped by 0.8 percent, whereby round bars decreased by 16.2 percent, followed by cold-rolled structural steel, deformed bars and wire rods which fell by 7.6 percent, 3.9 percent and 1.4 percent respectively. The MPI for deformed bars has decreased consistently since October 2017 – August 2018, but increased by 5.2 percent in June.

**+** Domestic sales in August 2018 reached 1.7 million tons, a 13.5 percent growth compared to the same period last year. Flat-formed steel reached 1.1 million tons in consumption, a 16.1 percent growth whereby consumption increased in all product groups. Thick hot-rolled steel sheets increased by 54.5 percent, followed by galvanized steel sheets, chromium steel sheets and thin cold-rolled steel sheets which grew by 45.1 percent, 39.2 percent and 33.5 percent. Long-formed steel reached 0.6 million tons in consumption, an 8.8 percent growth whereby steel bars and structural steel increased by 15.5 percent. This was the second month of increase for steel bars and structural steel after a 4-month consecutive drop from March – June 2018.

**+** Imports in August 2018 reached 1.2 million tons, a 14.6 percent growth compared to the same period last year. Flat-formed steel reached 0.9 million tons, a 14.7 percent growth from increased imports in almost all product groups. Imports of galvanized steel sheets, chromium steel sheets and thick hot-rolled alloy steel sheets increased by 56.8 percent, 51.2 percent and 50.3 percent respectively. Long-formed steel reached 0.3 million tons, a 14.3 percent increase from imports in carbon steel wires, allow steel wires and hot-rolled carbon structural steel which grew by 112.4 percent, 103.7 percent and 89.0 percent respectively.

*“The trend of the steel industry in September 2018 is expected to grow in production, whereby the MPI is forecasted to increase by 3.1 percent from products in the flat and long-formed steel sheet groups. Flat-formed steel is expected to grow from more orders from downstream industries including the electric appliances industry, whereas long-formed steel is expected to remain stable. Furthermore, there are also issues to monitor such as the temporary suspension of the safeguard measure for a period of 200 days for imported steel products in Turkey. This may affect the steel industry and downstream industries. The trend of Thai steel imports from China is likely to increase, especially galvanized steel sheets, which should be closely monitored.”*