

**Industrial Production Status**

Indicators	2016	2017			2018											
	Year	Nov.	Dec.	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Year(f)
MPI*	1.4	6.3	5.8	2.5	4.7	4.6	3.2	3.1	2.9	5.0	4.9	0.8	-2.7	5.8	0.98	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 **November 2018**, when considering the **manufacturing production index (MPI)**, grew positively from October 2018, with an increase of 0.98 percent from the same time last year resulting from the increase of domestic consumption, which grew by 4.4 percent.

When considering the MPI data for the past 3 months compared with the previous year (%YoY), the trend of industrial production projected in a good direction despite the temporary contraction in September but expanded again in October. In August, September, and October the rate of change was 0.8 percent, -2.7 percent, and 5.8 percent respectively, resulting in the average growth of the MPI for the first eleven months of 2018 was at 3.0 percent; an improvement compared to the first eleven months of 2017 which had an MPI average growth of 2.2 percent.

Indicators	2017		2018										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
MPI	6.5	-3.2	5.0	-0.1	10.5	-20.9	14.7	-1.1	-2.8	0.2	-1.9	3.2	1.7

For the past three months (August, September, and October 2018), the MPI (%MoM) has changed as follows. In August and September, the MPI was 0.2 percent and -1.9 percent respectively. According to the normal seasonality in the year, the MPI normally increases during September; however, the MPI of September this year was affected by the temporary decrease of exports. As for October 2018, the rate of change was 3.2 percent.

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

- Automobile and engines —the MPI grew by 7.13 percent from diesel engines, gasoline engines, and pickup trucks, in line with the expansion of the domestic market from the launching of new models and sales promotion activities of manufacturers.
- Sugar — the MPI grew by 236.44 percent from the commencing of sugarcane processing ten days (20 Nov. 18) earlier than the previous year in line with a large amount of sugarcane to prevent the issue of sugarcane being left over like last year.

➤ Petroleum refinery — the MPI grew by 11.24 percent mainly from gasohol 95 and diesel oil, in line with the increasing demand of petroleum for transportation and domestic logistics of which increased according to the continuous growth of the economy.

➤ Electronic components —the MPI grew by 6.45 percent in line with the expansion of both domestic and global electronic component markets.

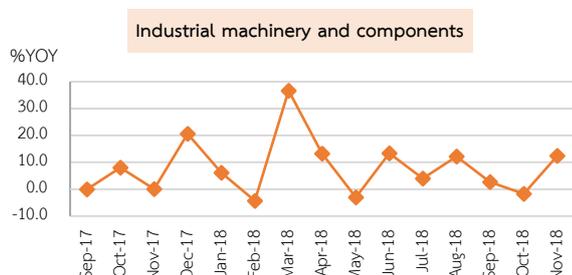
➤ Air conditioners — the MPI grew by 9.74 percent from the release of new products from manufacturers and increased demand in small and energy saving air conditioners. The volume of air conditioner exports also rose to Japan, Vietnam, Indonesia and Singapore markets.

**The MPI for 2018 is forecasted to grow positively at an average of 3.0 percent** (in 2017, the growth was 2.5 percent). The overall Thai economy is likely to increase continuously, although product exports may slow down due to the impact of the trade war between the United States and China. However, tourism has improved with the continued increase in Chinese tourists. At the same time, the momentum from domestic demand continues to increase, as well as the continuation government supporting measures and Public-Private Partnerships and Joint Ventures projects in basic infrastructure.

# Other Industrial Economic Indicators in November 2018

## Other Industrial Economic Indicators in November 2018

### Thailand Industrial Sector's Imports



Source: Ministry of Commerce

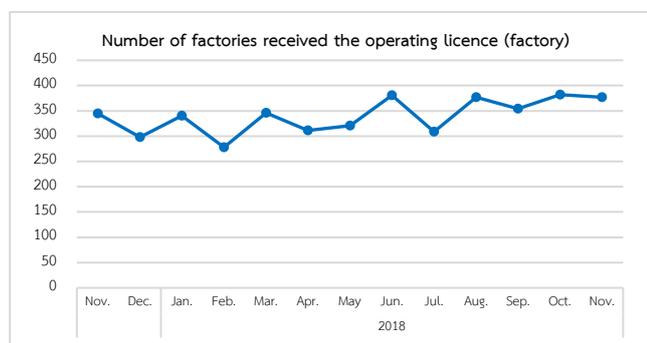


Source: Ministry of Commerce

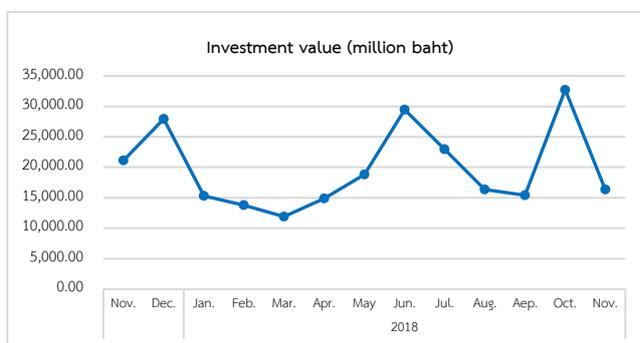
**+** **Imports of industrial machinery and components** in November 2018, valued 1,678.9 million USD, increasing by 12.4 percent compared to the same month last year. The growth came from the rise in imports of engines; shafts and other components; air pumps, liquid pumps; turbine engines and parts; machinery used in other industries, and machinery components. Consequently, imports of machinery increased to support the growth of production according to economic expansion.

**+** **Imports of raw materials and semi-finished products (excluding gold)** in November 2018, valued 7,461.1 million USD, increasing by 8.7 percent compared to the same month last year. The growth was in line with imports of chemicals, equipment and components of electrical appliances and electronics; iron, steel and products thereof; plastic pellets, and plastic products, which was supported by the use of raw materials for production to meet demands from the domestic market and exports of some products.

## Industrial Operation Status



Source: Department of Industrial Works



Source: Department of Industrial Works

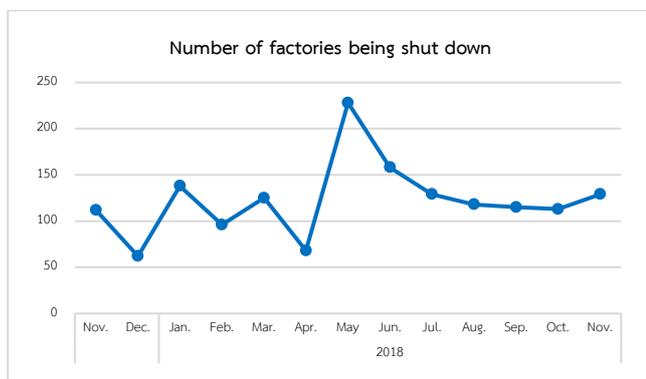
**+** A total of 377 factories were licensed to operate in November 2018. The number decreased by 1.3 percent from October 2018 (%MoM) but increased by 9.3 percent compared with the same month last year (%YoY).

**-** The total value of investment from the licensed factories for operation in November 2018 was 16,360.8 million Baht, decreasing by 50.0 percent from October 2018 (%MoM) and 22.5 percent from the same month last year (%YoY) respectively.

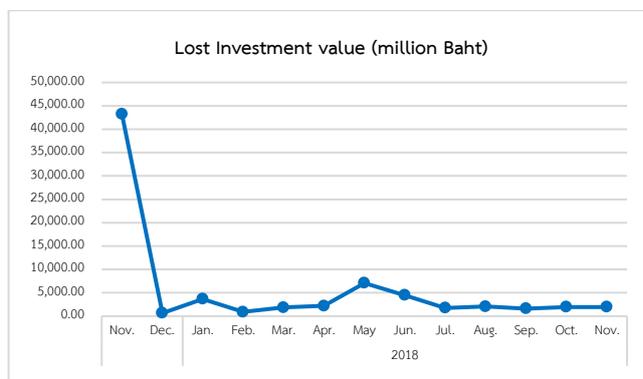
*“The industry with the highest number of new licensed factories for operation in November 2018 was concrete, concrete-mixed gypsum, and plaster product industry (33 factories), followed by the gravel/sand/clay digging and epilation industry (21 factories).”*

*“The industry with the highest value of investment in November 2018 was the production of wood veneer and plywood industry valued at 3,197 million Baht, followed by manufacturing, assembly, and repair of water pumps, air conditioner, and refrigerator valued at 1,310 million Baht.”*

■ Industrial Operation Status (cont.)



Source: Department of Industrial Works



Source: Department of Industrial Works

➖ A total of 129 factories shut down the operation in November 2018. The number of shutdowns increased by 14.2 percent from October 2018 (%MoM) and increased by 15.2 percent from the same month last year (%YoY).

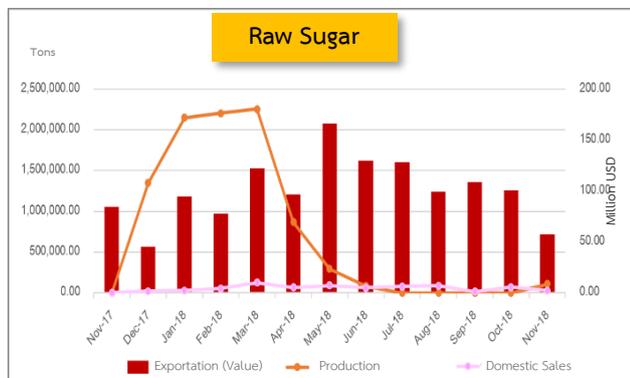
➕ The lost investment value on shutdowns in November 2018 equated to 1,971.8 million Baht. The values decreased by 0.2 percent from October 2018 (%MoM) and by 95.4 percent from the same month last year (%YoY).

*“The industry with the most factory shutdowns in November 2018 was the gravel/sand/clay digging and epilation industry (14 factories), followed by the wooden household furniture and gas packing industries (7 factories for each industry).”*

*“The industry with the highest value of investment with factory shutdowns in November 2018 was the fiber fermentation, carbonization, combing, rolling, spinning, baking or dying industry valued at 401 million Baht, followed by the electricity production industry valued at 277 million Baht.”*

## Industrial Economic Status by Industrial Sectors in November 2018

### 1. Food Industry

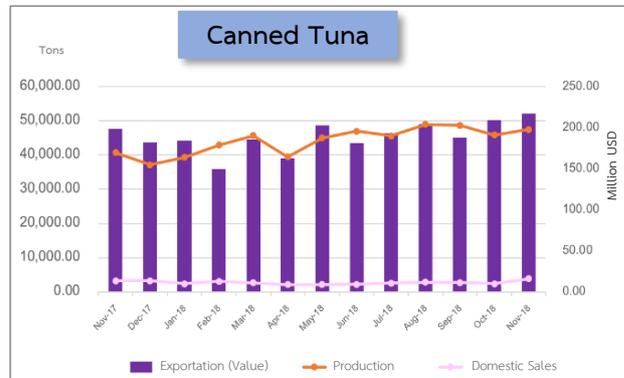


Source: Office of Industrial Economics and the Ministry of Commerce

**+** **Production** of food product in November 2018 increased by 10.8 percent (%YoY), classified as follows:

1) Export-orientated products including sugar increased by 365 percent (tons -%YoY) as this year sugar production started earlier (December 1, 2017) than the year before to prevent problems of sugar cane being left on the field like last year, with the amount of sugarcane production that is expected to be relatively high. This was combined with the production of canned tuna and chilled and frozen shrimp which grew by 16.8 percent and 5.4 percent respectively (%YoY) due to an increasing demand among trading partners.

2) Domestic market-orientated products namely, ready-to-drink milk, refined palm oil, and soil bean oil increased by 7.0 percent, 4.6 percent, and 2.1 percent (%YoY) respectively from the result of the continuous increase in consumer demand.



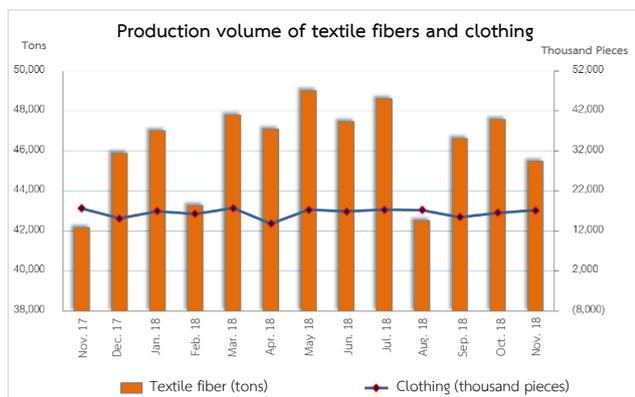
Source: Office of Industrial Economics and the Ministry of Commerce

**-** **Domestic sales** volumes in November 2018 decreased slightly by 2.3 percent (%YoY), as household income in the agricultural sector contracted from prices, such as rubber, palm oil and chicken meat, together with less production due to rain-shortage in some areas, affecting products such as jasmine rice, pineapple, and palm oil.

**-** **Export markets:** The overall export value of food products in November 2018 decreased by 8.4 percent (%YoY) in products such as cassava chip, fresh longan, raw sugar, white sugar, canned pineapple, white rice, and chilled and frozen chicken which decreased by 42.5 percent, 32.0 percent, 37.0 percent, 27.7 percent, 27.7 percent, 7.8 percent, and 6.1 percent respectively (%YoY). However, key products such as tapioca flour, canned sardine, canned tuna, processed chicken, and jasmine rice remained on the rise according to the global demand for commodities.

**Economic Forecasts and Expectations** — overall production and export value of food industry in December 2018 are expected to grow in line with the increasing of pre-orders from overseas and gradual expansion of domestic demand, such as chilled and frozen chicken, canned tuna, canned sardines, and tapioca starch, including rice products (white rice and jasmine rice) that trade partners have continuously increased demand. This is combined with positive factors from the acceleration of public and private investment which will continue to expand, coupled with household spending which still has a good growth trend.

## 2. Textile and Garment Industry



Source: Office of Industrial Economics

### Production

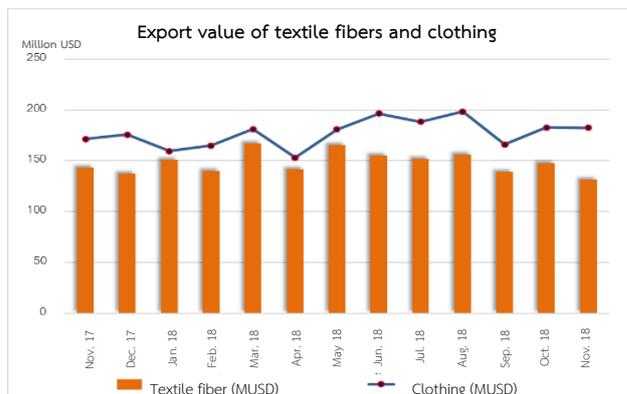
**+** *Textile fiber products* —synthetic and specialty fibers such as collagen and Aramid fibers — increased by 7.89 percent

**-** *Fabrics and apparels* dropped by 1.95 percent and 2.4 percent respectively (%YoY), as weaving factory operators ceased cotton production since the demand of the domestic market and exports decreased. However, the production of synthetic woven fabrics continued to expand to support both domestic and international markets. Apparel in the women’s underwear group dropped as imports from China replaced domestic production. On the other hand, the men's clothing sector grew in line with the export to neighbouring countries.

### Domestic sales

**+** *Fabrics and apparels* expanded by 8.64 and 5.38 percent respectively (%YoY), partly resulted from “Un Ai Rak Bicycle Ride” which provided a cycling jersey for an applicant who participated in the said activity.

**-** *Textile fibers* dropped by 3.48 percent (%YoY), as the result from import of high-quality filament fiber from the US to produce apparels for export.



Source: Ministry of Commerce

### Exports

**+** *Exports of Apparel* increased in value by 6.44 percent (%YoY) as Thailand gained trust in the production of clothing for foreign brands, of which are partly design and production outsourcing.

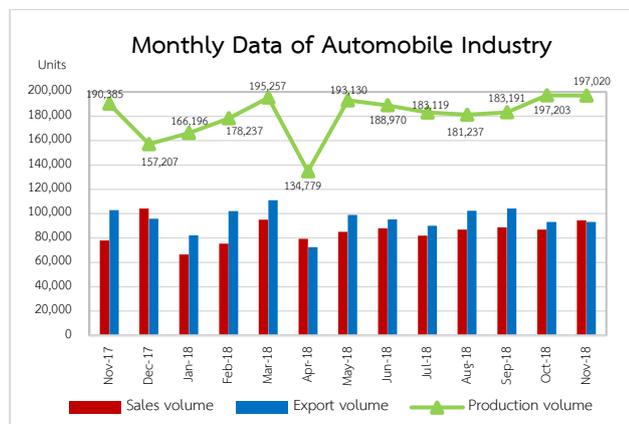
**-** *Exports of textile fiber and fabric* decreased in value by 8.3 percent and 14.49 percent (%YoY) respectively, especially in the US and China markets.

### Forecast for December 2018

Production and exports of textile fibers and apparels are expected to grow from synthetic fibers which increase following demand from key markets such as Vietnam, Japan, and China. Apparel grew in production for international branded clothing, whereas production and exports are projected to slow down in fabrics made from synthetic fibers from the inability to compete in price wars with China and Vietnam.

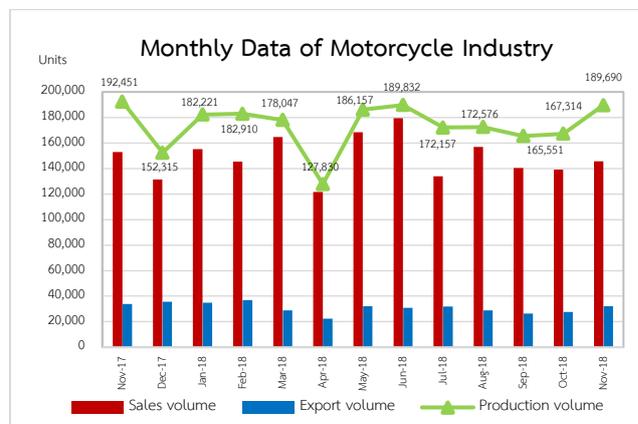
### 3. Automotive Industry

#### ■ Automobile Production Industry



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

#### ■ Motorcycle Production Industry



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

**+** **Automobile production** In November 2018 reached 197,020 units. Production decreased from October 2018 by 0.09 percent (%MoM) but a 3.49 percent increase from the same month last year (%YoY) due to an increase in production of 1-ton pickup trucks and derivatives.

**+** **Domestic sales of automobiles** in November 2019 reached 94,643 units, increasing from October 2018 by 8.87 percent (%MoM) and by 21.21 percent from the same month last year (%YoY) from an increase in sales of passenger cars, 1-ton pickup trucks, commercial vehicles, and PPV and SUV cars, from both public and private investment.

**-** **Automobile exports** in November 2018 reached 93,108 units, an 0.25 percent decrease from October 2018 (%MoM) and a 9.64 percent drop from the same month last year (%YoY) whereby exports to Oceania, the Middle East, EU, and North America slowed down.

*"The automotive industry is expected to grow in December 2018 compared to December 2017, from the growing trend of the domestic economy."*

**+** **Motorcycle production** in November 2018 reached 189,690 units. The production increased by 13.37 percent from October 2018 (%MoM) but decreased by 1.43 percent from the same month last year (%YoY) resulting from the decrease in production of sport motorcycles.

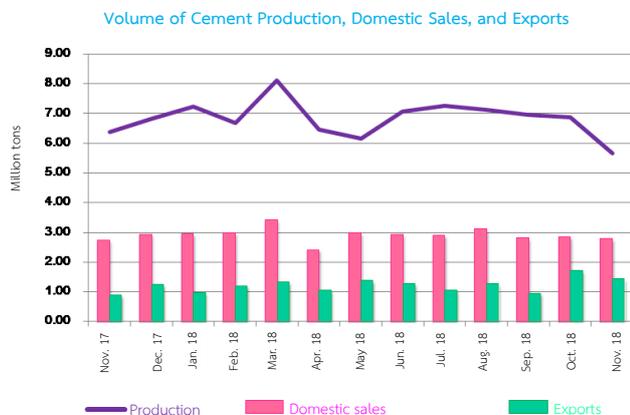
**+** **Domestic sales of motorcycles** in November 2018 reached 145,633 units. The production increased by 4.55 percent from October 2018 (%MoM) but decreased by 4.85 percent from the same month last year (%YoY) resulting from the decrease in sales volume of 51-110 cc, 111-125 cc, and ≥400 cc motorcycles.

**+** **Exports of motorcycles** in November 2018 reached 32,174 units. The production increased by 16.61 percent from October 2018 (%MoM) but decreased by 4.87 percent from the same month last year (%YoY), whereby exports to the US, the Netherlands, and Myanmar markets slowed down.

*"In December 2018, the trend of the motorcycle production industry is expected to decline compared to December 2017."*

## 4. Cement Industry

### Overall Cement Industry



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.

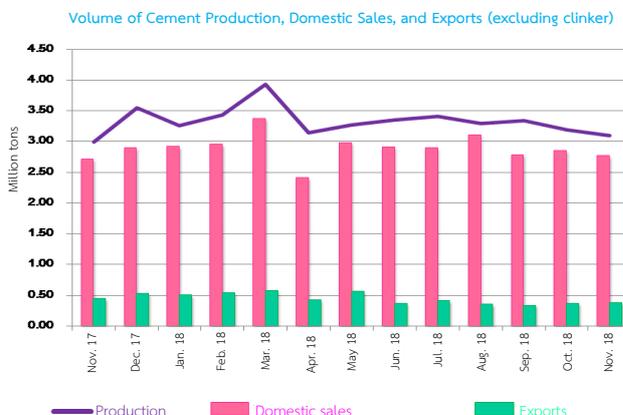
**- Overall cement production** in November 2018 reached 6.88 million tons. The volume dropped by 17.78 percent from October 2018 (%MoM) and by 11.37 percent compared to the same month last year (%YoY) due to decreasing in clinker production.

**+ Overall domestic cement sales** in November 2018 reached 2.87 million tons, decreasing by 2.39 percent from October 2018 (%MoM); however, the volume increased by 1.59 percent from the same month last year (%YoY), supported by positive factors from progress in public infrastructure projects.

**+ Total cement exports** in November 2018 reached 1.42 million tons. The volume decreased by 16.32 percent from October 2018 (%MoM) but increased by 60.30 percent from the same month last year (%YoY) as a result of clinker orders from key export markets such as Bangladesh have increased by 573.84 percent.

The trend of overall cement production industry in December 2018 will continue to rise.

### Cement Industry (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 November 2018 reached 3.10 million tons. The production decreased by 2.62 percent from October 2018 (%MoM) but increased by 1.80 percent from the same month last year (%YoY).

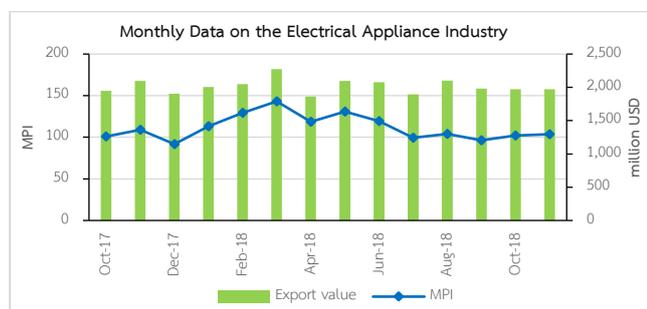
**+ Domestic sales of cement** (excluding clinker) in November 2018 reached the total volume of 2.77 million tons, a 2.90 percent decrease from October 2018 (%MoM) but a 1.80 percent increase compare to the same month last year (%YoY).

**+ Export of cement** (excluding clinker) in November 2018 reached 0.38 million tons. The volume increased by 4.94 percent from October 2018 (%MoM) but decreased by 14.95 percent (%YoY) from the same month of last year. This was a result of key export markets namely, Cambodia, Lao, and Myanmar of which cement was domestically produced, have reduced orders by 26.08 percent, 21.35 percent, and 17.92 percent respectively.

The trend of the cement industry (excluding clinker) in December 2018 will also continue to rise.

## 5. Electrical Appliance and Electronics Industry

### ■ Electrical Industry



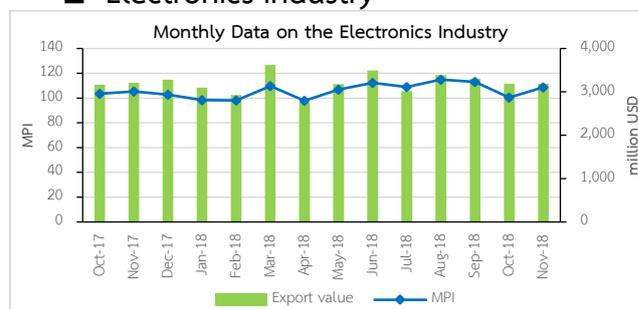
Source: Office of Industrial Economics

➖ **Production of electrical appliances** reached a production index of 103.5, decreasing by 4.9 percent compared to the same month last year. Products which declined in production were electric wires, washing machines, rice cookers, refrigerators, electronic motors, compressors, and microwaves by 22.2 percent, 18.5 percent, 15.8 percent, 13.6 percent, 10.7 percent, 7.6 percent, and 6.8 percent respectively. The production of electric wires, rice cookers, electric motors, compressors, and microwaves dropped from domestic sales, while the output of refrigerators and washing machines fell due to the decrease in orders from overseas. On the other hand, products that increased in production were thermos kettles, air conditioners with separate condensing units, air conditioners with separate fan coil units, and household fans by 15.7 percent, 13.4 percent, 7.0 percent, and 5.5 percent respectively. The production of thermos kettles, household fans, and air conditioners grew from increased domestic sales and purchase orders. Air conditioners increased in the US, Japan, and Vietnam markets as demand among trading partner countries grew.

➖ **Exports of electrical appliances** reached a value of 1,951.4 million USD, a drop by 6.9 percent compared to the same month last year from key markets that contracted, including EU, the US, China and ASEAN. Refrigerators had an export value of 125.9 million USD, down 2.5 percent, whereas washing machines valued 94.1 million USD, a decrease by 37.6 percent, with a decline of 99.2 percent in the US market due to the safeguard measures on washing machines that the US imposed on Thailand. Meanwhile, air conditioners and components reached an export value of 328.6 million USD, a 7.7 percent increase, whereas television signal receivers valued 117.7 million USD, a 50.8 percent increase from the US and Japan.

*"Production forecast for December 2018 is expected to increase slightly by 0.9 percent compared to the same last year, from air conditioners with increased overseas orders, such as ASEAN and Japan."*

### ■ Electronics Industry



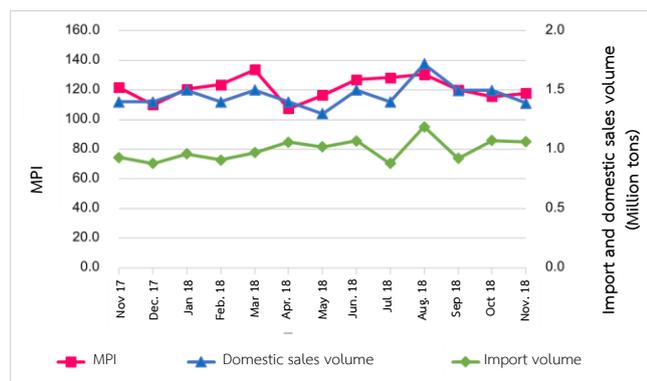
Source: Office of Industrial Economics

➕ **Production of electronics** reached an MPI of 108.6, increasing by 3.1 percent compared to the same month last year. Electronics that increased in production were PCBA's, Semiconductor device transistors, printer, and other ICs by 16.2 percent, 8.4 percent, 5.7 percent, and 2.8 percent respectively. The growth was in line with the expansion of the world's electronics products. Meanwhile, HDD and monolithic ICs decreased by 8.0 percent and 1.4 percent respectively as a result of decreasing orders from China.

➖ **Exports of electronics** valued 3,176.0 million USD. The value decreased by 8.7 percent compared to the same month last year as a result of dropping in exports to almost all key markets including Japan, China, ASEAN, and EU. Exports of computers and components reached the export value of 1,273.4 million USD, decreasing by 8.8 percent. Exports of HDDs declined by 4.9 percent whereby decreasing in China market by 36.5 percent. Exports of ICs valued 682.3 million USD, falling by 4.7 percent of which decreased in China and Hong Kong markets by 20.6 percent and 14.6 percent respectively as a result from US-China trade retaliation which affected Thailand's production chains and exports.

*"It is expected that the production of electronics in December 2018 will increase by 1.0 percent compared to the same month last year, from continuously increasing in exports of computers and components."*

## 6. Iron and Steel Industry



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

**⊖ The manufacturing production index** in November 2018 reached 117.7, dropping by 3.2 percent compared to the same period last year. Analyzed by key products that were flat and long-formed steel, both product groups decreased in MPI. Flat-formed steel reached an MPI of 109.7, decreasing by 3.3 percent as tin-coated steel sheets and hot-rolled steel coils dropped by 18.7 percent and 9.8 percent respectively, as some manufacturers had problems with raw materials for production. However, production of chromium-plated steel sheets and zinc-plated steel in November increased. Chromium-plated steel increased by 29.0 percent from increased production in continuous industries such as the metal packaging industry, whereas zinc-plated steel grew by 9.7 percent (growth was both in GA steel used in the automobile and electrical appliances industries, and hot zinc-coated steel used in construction). Long-formed steel reached an MPI of 124.2, drooping by 1.9 percent from the production of steel rods which decreased by 26.8 percent, followed by cold-rolled structural steel and deformed steel which declined by 6.7 percent and 6.5 percent respectively.

**⊕ Domestic sales** in November 2018 reached 1.4 million tons, a 1.6 percent increase compared to the same period last year. Sales of flat-formed steel reached 1.0 million tons, a 14.8 percent increase whereby chromium-plated steel sheets grew by 54.8 percent, followed by tin-plated steel sheets and thin hot-rolled steel sheets which increased by 27.5 percent and 16.6 percent respectively, from more imports. Sales of long-formed steel dropped by 20.1 percent from fewer sales of steel rods and structural steel which fell by 20.8 percent.

**⊖ Imports** in November 2018 reached 1.1 million tons. The volume increased by 14.1 percent compared to the same period last year. Flat-form steel reached 0.8 million tons, a 17.3 percent growth from increased imports thick hot-rolled stainless-steel sheets by 138.4 percent from Taiwan, Malaysia, and Japan. This was followed by thin hot-rolled carbon steel sheets, chromium-plated sheets and tin-plated sheets which grew by 118.5 percent, 110.1 percent and 61.4 percent respectively. Long-formed steel reached a volume of 0.2 million tons, a 4.8 percent increase from imports of hot-rolled carbon structural steel which grew by 84.5 percent from India, Japan and Turkey. This was followed by hot-rolled stainless structural steel, carbon steel rods and seamless steel pipes by 47.0 percent, 43.8 percent and 42.0 percent respectively.

*“The trend for the steel industry in December 2018 is expected to increase in production slightly from last year, with growth in downstream industries such as the electrical appliance, automotive and construction industries. However, there are still issues to be monitored regarding declining steel prices in China and Asia, especially the hot-dipped galvanized steel prices from China, which has continued to decline due to the drop in domestic prices and a result of the policy to increase tax returns on Chinese products. The list includes steel products such as galvanized steel. It is expected that the result of such measures will encourage Chinese manufacturers to increase exports which will affect Thai manufacturers in the steel industry.”*