

Industrial Economic Status Report

for 2017 and Outlook for 2018



By the Office of Industrial Economics

75/6 Rama VI Road, Rajathevee, Bangkok 10400

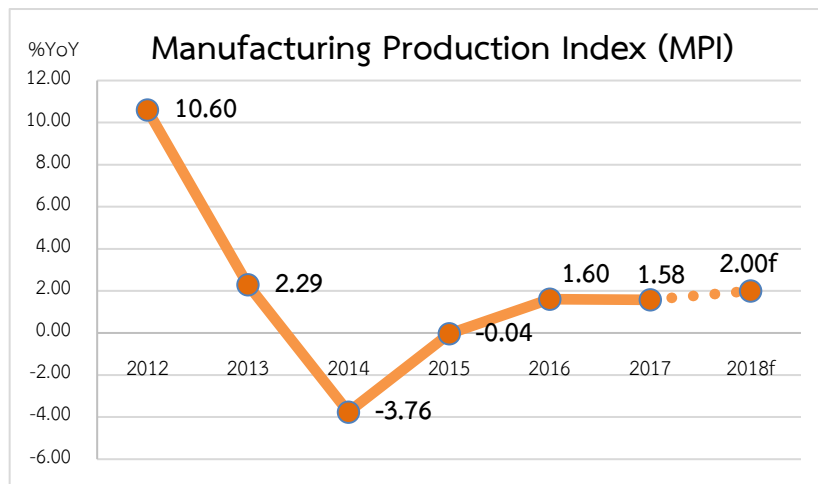
Website: www.oie.go.th

Table of contents

	Page
Part 1	
Summary of the Thai Industrial Economy in 2017 and Outlook in 2018	3
Part 2	
Thai Industrial Sectors in 2017 and Outlook for 2018	15
2.1 Iron and Steel Industry	15
2.2 Electrical Appliance Industry	16
2.3 Electronics Industry	17
2.4 Automobile and Parts Industry	18
2.5 Motorcycle and Parts Industry	19
2.6 Chemical Industry	20
2.7 Plastics Industry	21
2.8 Petrochemical Industry	22
2.9 Pulp, Paper and Print Media Industry	23
2.10 Ceramics Industry	24
2.11 Cement Industry	25
2.12 Textile and Garment Industry	26
2.13 Wood and Wooden Furniture Industry	27
2.14 Pharmaceutical Industry	28
2.15 Rubber and Rubber Products Industry	29
2.16 Footwear and Leather Products Industry	30
2.17 Gem and Jewelry Industry	31
2.18 Food Industry	32
Part 3	
Thai Industry Changes under the concept of Thailand 4.0	34

Summary of the Thai Industrial Economy in 2017 and Outlook in 2018

The industrial economic status in 2017 grew by 1.58 percent in the Manufacturing Production Index (MPI). This was similar to the growth of 2016 which the MPI grew by 1.6 percent. Industries which had good growth in 2016 were **electronics** (exports to key markets increased in line with the trend for Internet of



Things (IoT)), **automobiles** (growth in domestic markets from the improved domestic economy), **the food industry** (production increased as the industry was significantly boosted consistent demand of exports coupled with increased domestic consumption).

Outlook for 2018

The Manufacturing Production Index (MPI) in 2018 is expected to expand in the range of 1.5-2.5 percent. Positive factors are the global economic recovery which will support increased exports at a consistent positive rate, public investment in conjunction with the development of the Eastern Economic Corridor (EEC).

↑ Iron and Steel: The MPI of 2018 is expected to increase slightly by 2 percent from last year. It was expected that this was resulted from public investments in major transportation projects such as high-speed trains, double-track railway lines, development of EEC and private construction which is projected to grow.

↑ Automobiles: Estimation of the automobile industry in 2018 is expected to manufacture approximately 2,000,000 units, a growth of 2.56 percent, divided into 900,000 units for domestic sales and 1,100,000 units for exports.

↔ Electrical Appliances: In 2018, production and exports of electrical appliances is expected to maintain stable, with a slight increase by 1 percent and 3 percent respectively from last year, mostly from domestic markets and recovering key markets. Washing machines are expected to grow from increased purchase orders from key markets, particularly from the U.S. On the other hand, air conditioners are expected to slow down from reduced exports to ASEAN markets because of higher competition.

↑ Electronics: In 2018, production of electronics is expected to grow by 5 percent and to increase in export value to key markets by 7 percent from last year. ICs are projected to grow from higher demand as they are main component of technologically advanced products including smart phones and tablets which have had higher demand.

↑ Chemicals: In 2018, the chemical industry is expected to reach an export value of 8,105 million USD and an import value of 15,211 million USD, increasing by 3 percent in line with domestic economic growth by having factors namely economic stimulus from the public sector, and the growth of the food and automobile industries, in supporting chemical trades.

↔ Pulp, Paper and Print Media: In 2018, the pulp, paper and print media industry is expected to grow continuously from 2017 regarding consumer demand in key industries, particularly paper packaging. Books and print media are foreseen to slowdown from changing consumer behavior, especially with social media playing a larger part with print media. This is both in terms of advertising and sales volume which affect print media heavily. However, literature, novels, translated novels, children books and educational books are expected to grow.

↑ Ceramics: Overall Cement Industry in 2018, production and sales of ceramics is expected to grow from production to support the rise in exports to the U.S., Japan, and ASEAN. Furthermore, the growth of the domestic and global economy which has improved consistently. This will boost investment in the business and private sectors, increasing the income base of the people. People will have the ability to repair households, thus the ceramics market is projected to grow accordingly.

↑ Cement: In 2018, production and sales of cement is expected to grow slightly from the recovering global economy. If progress in the government's existing infrastructure projects continue in line with plans for both existing and new projects, this will significantly boost domestic demand for cement.

↑ Textiles and Garments: Overall production of textile fibers, fabrics and apparels is expected to grow from the trend in exports which is projected to grow with the economic status of trade partners such as China, Japan and Vietnam, particularly in exports of textile fibers and fabrics to CLMV markets which is the world's key garment production base. This is coupled with production to support domestic sales which is projected to grow from public and private investments, a supporting factor in boosting consumer confidence.

↑ Wood and Wooden Furniture: Production and sales of wooden furniture in 2018 is expected to grow from 2017, by the stimulus of production to support exports that are projected to grow more than in 2017, and government economic stimulus policies that continue to drive the domestic economy. This is consistent with export of wood and wooden products in 2018 which is expected to grow in line with the economic status of major trading partners such as China, Japan and the U.S., where the trend has increased consistently.

↑ Pharmaceuticals: In 2018, the pharmaceutical industry is projected to grow in line with growth of domestic and international markets, particularly Vietnam and Myanmar which are key export markets for Thai pharmaceutical products.

↑ Rubber and Rubber Products: Production of upstream rubber products, tires and rubber gloves in 2018 is expected to grow in line with overseas market expansion, particularly China which is a key export market for upstream rubber products and the U.S. for Thai tires and rubber gloves.

↔ Footwear and Leather Products: Production of footwear and leather products in 2018 is expected to increase in tanning and dressing leather as the world economy recovers. Production of luggage and footwear are expected to slow down. However, there are factors stimulating production such as growth of tourism from China, Malaysia and South Korea, coupled with government investments, purchasing stimulus initiatives from the government and the state welfare scheme which will result in a better overall economic status. For exports, all leather, tanned leather, leather-infused travel bags, footwear and parts are expected to grow in line with demand from CLMV countries as the main factor.

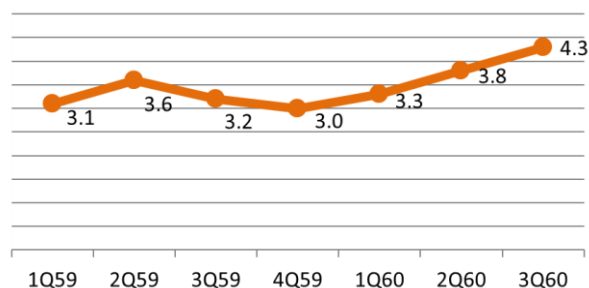
↑ Gems and Jewelry: Production of gems and jewelry in 2018 is expected to increase from last year. This is partially from increased demand in line with the global economic status which is expected to improve, resulting in boosted consumer confidence. Export of gems and jewelry (excluding gold), is expected to be relatively stable. Even though demand for raw materials will drop, consumers will have demand genuine diamond jewelry and artificial jewelry with unique designs.

↑ Food: Overall production and export of foods in 2018 is expected to grow from last year because of increased agricultural production from suitable climates and the recovering world economy, particularly among key trading partners such as the U.S., EU, China, Japan and CLMV. This is coupled with a projection for decreased production costs in line with low feedstock prices. This will result in continued growth of exports in livestock, fisheries, fruits and vegetables, sugar, rice, grains and cereals. Furthermore, domestic consumption is expected to grow from continued growth in the overall economy.

Thailand's Economic and Industrial Overview for 2017 and Outlook for 2018

GDP Grew by 3.8 Percent in the First Quarter

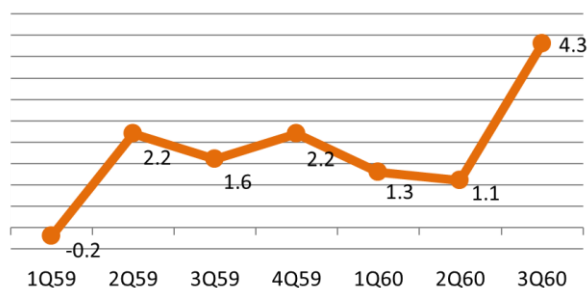
(%YoY)



Source: Office of the National Economic and Social Development Board

GDP for the Industrial Sector Grew by 2.2

Percent in the First Quarter (%YoY)

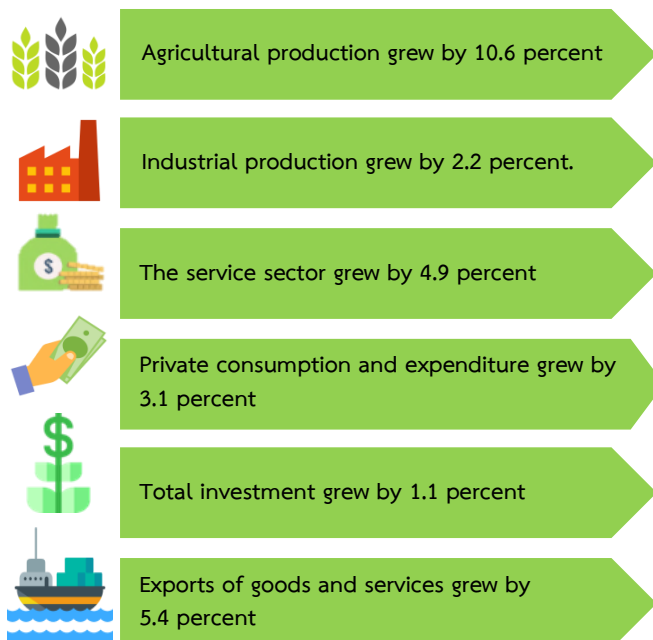


Source: Office of the National Economic and Social Development Board

Gross Domestic Product or GDP in the first three quarters of 2017 grew by 3.8 percent, an increase from the first two quarters of 2017 which grew by 3.6 percent and 3.3 percent from the first three quarters of 2016.

Industrial growth in the first three quarters of 2017 was driven by a recovery in industrial production and an improvement of industrial exports regarding the recovery of the global economy.

Key Factors of GDP Growth



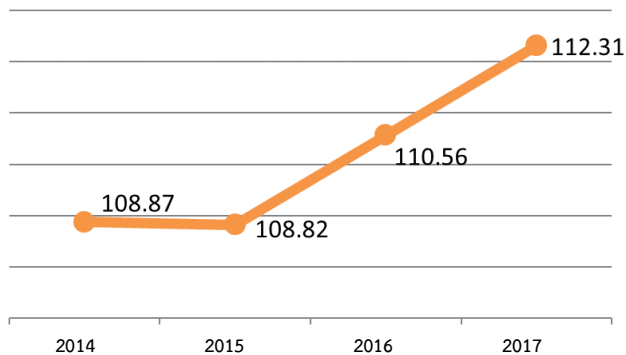
GDP in the industrial sector in the first three quarters of 2017 grew by 2.2 percent, a significant increase from the first two quarters of 2017 which grew by 1.2 percent. This was due to accelerated and fragmented growth in major industries such as automobiles, engines, equipment and components, electronic tubes and electronic components, manufacture of basic iron and steel products, rubber products, processed and preserved aquatic animal, aquatic animal products, products derived from refined petroleum, and plastic products.

In the first three quarters of 2017, agricultural production grew by 10.6 percent, while the industrial sector grew by 2.2 percent, the service sector by 4.9 percent, private consumption by 3.1 percent, overall investments by 1.1 percent and export of goods and services by 5.4 percent.

Key Industrial Index

Manufacturing Production Index

Jan – Dec 2017 grew by 1.58 percent (%YoY)



Source: Office of Industrial Economics

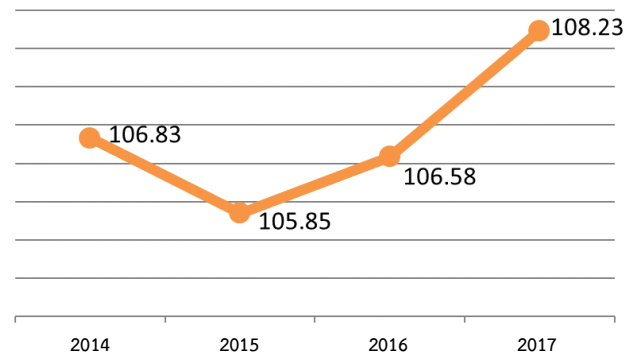
In the 12 months (January - December) of 2017, the Manufacturing Production Index (MPI) was 112.31, an increase by 1.58 percent from the same period of 2016 (110.56).

Industries that contributed to the growth of MPI from 2016 were for example the production of other rubber products, the production of electronic tubes and components, and production of components and equipment for motor vehicles and engines.

For 2018, the MPI is expected to grow from 2017 due to the favorable global economic growth which is a factor that supports exports. This is coupled with the government's investment to accelerate and the improvement of private investment and employment.

Shipment Index

Jan – Dec 2017 grew by 1.54 percent (%YoY)



Source: Office of Industrial Economics

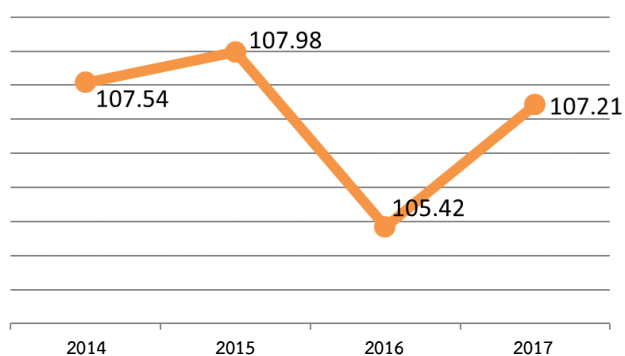
During the 12 months (January - December) of 2017 the Shipment Index was 108.23, an increase by 1.54 percent from the same period of 2016 (106.58).

Industries that contributed to the growth of the Shipment Index from 2016 were the manufacture of components and equipment for motor vehicles and engines, manufacture of electronic tubes and components, and the production of vegetable oils and animal oil and fat.

For 2018, the Shipment Index is expected to grow from 2017 in line with the MPI (value added) above.

Finished Goods Inventory Index

Jan – Dec 2017 grew by 1.69 percent (%YoY)



Source: Office of Industrial Economics

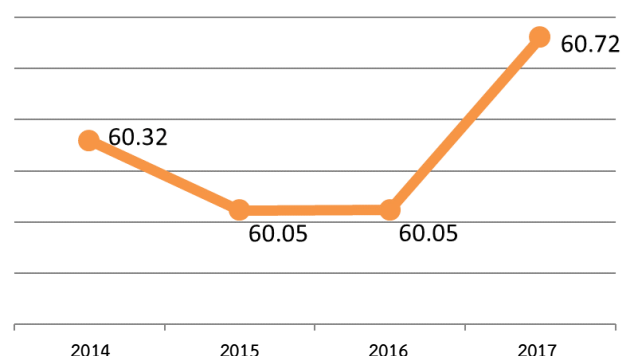
In the 12 months (January - December) of 2017, the Finished Goods Inventory Index was 107.21, an increase by 1.69 percent from the same period of 2016 (105.42).

Industries that contributed to the growth of the Finished Goods Inventory Index from the same period in 2016 were for example the production of general purpose machinery, basic iron and steel products, and electronic tubes and components thereof.

For 2018, the Finished Goods Inventory Index is projected to grow from 2017 due to a significant recovery in the manufacturing industry and growth in major industries resulting in inventories being adjusted to comply and suitable with the industry circumstance that continuing recovery.

Capacity Utilization Rate

Capacity utilization rate at 60.72 percent



Source: Office of Industrial Economics

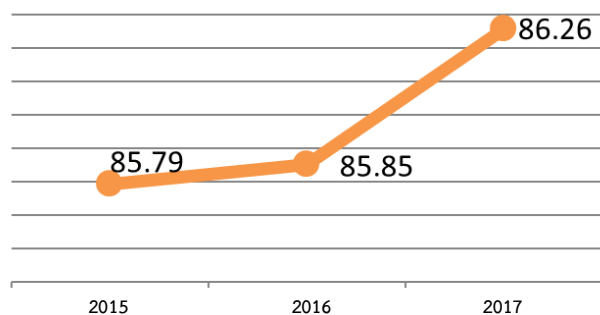
In the 12 months (January - December) of 2017, the Capacity Utilization Rate was at 60.72 percent, an increase by 60.72 percent from the same period of 2016 (60.05 percent).

Industries that contributed to the growth of the Capacity Utilization Rate from the same period in 2016 were for example production of electronic tubes and components, automobiles, engines and components, and other rubber products.

For 2018, the Capacity Utilization Rate is projected to grow from 2017 due to continuous government investment promotion, consistent with investment in large-scale infrastructure projects and the development of the Eastern Economic Corridor (EEC) and Special Economic Zone (SEZ) at the border.

Industrial Sentiment Index

Jan – Dec 2017 index was at 86.26



Source: The Federation of Thai Industries

In January - December (first 12 months) of 2017, the Industrial Sentiment Index average was 86.26 increasing from the same period of 2016 (85.85). The 3-month forward-looking Industrial Sentiment Index was 101.26 increasing from the same period of 2016 (100.38).

The outlook of Industrial Sentiment Index in 2018 is expected to grow from 2017 due to the continuing domestic economic expansion resulted from large-scale infrastructure investment of the government such as transportation, with investments in the skytrain by the Mass Rapid Transit Authority of Thailand (MRTA) to cease trafficjam in Bangkok and the Eastern Economic Corridor (EEC) to raise Thailand industrial economy as regional manufacturing hub.

Foreign Trade

“Foreign trade in 2017 increased from 2016 due to an increase in import and export value, consistent with economic expansion and foreign trade surplus of 13,930.7 million USD”.

Thailand’s foreign trade in 2017 reached a total value of 459,457.6 million USD, comprising of export value amounting to 236,694.2 million USD and import value amounting to 222,763.4 million USD. Compared to the previous year, export value increased by 9.9 percent and import value increased by 14.7 percent resulting in a trade balance surplus of 13,930.7 million USD in 2017.

Export Structure



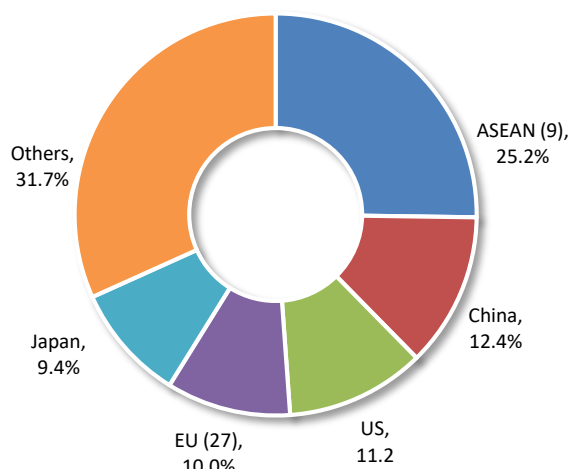
Source: Ministry of Commerce

Exports value in 2017 was 236,694.2 million USD increasing by 9.9 percent. When categorized the product groups, it was found that export value increased in almost all product groups with exports of agricultural products valued at 22,945.2 million USD, industrial products valued at 188,148.3 million USD and minerals and fuels valued at 8,681.4 million USD, equating to a 17.8 percent, 9.4 percent and 29.5 percent growth respectively, whereas industrial agricultural products valued at 16,919.4 million USD, equating to a 1.6 percent drop.

The export value of industrial products in 2017 grew by 9.4 percent. Industrial products that expanded in export value were automobiles, accessories and components (exports valued at 27,045.2 million USD which grew by 2.7 percent), computers, equipment and components thereof (exports valued at 18,497.1 million USD which increased by 10.4 percent), rubber products (exports valued at 10,255 million USD which grew by 55.8 percent), plastic pellets (exports valued at 8,651.7 million USD which increased by 12.1 percent) and circuit boards (exports valued at 8,267.7 million USD which grew by 7.1 percent).

Export Markets

Export ratio classified into key export markets

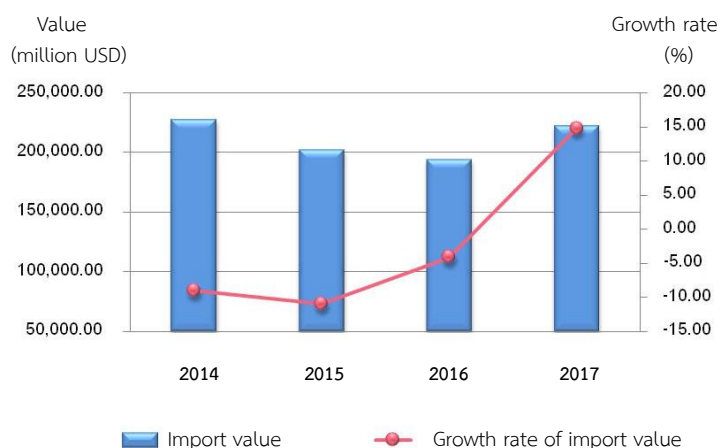


Source: Ministry of Commerce

In 2017, exports to key markets including ASEAN (9 countries), China, the U.S., EU and Japan accounted for 68.3 percent of overall exports. Compared to the previous year, the value of exports to all key markets increased, especially to China which had the largest growth by 23.7 percent, followed by Japan, ASEAN, the U.S. and EU which had a growth by 8.9 percent, 8.9 percent, 8.3 percent and 7.5 percent respectively.

Import Structure

Value and growth rate of imports

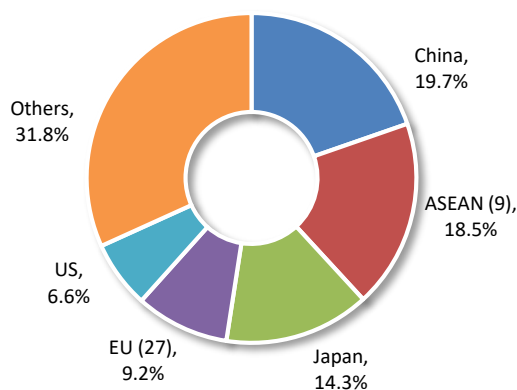


Source: Ministry of Commerce

Imports value in 2017 was 222,763.4 million USD increasing by 14.7 percent. When categorized by the product groups, it was found that the import value increased in all product groups with the imports of minerals and fuels valued at 31,317.3 million USD, capital goods valued at 60,822 million USD, raw materials and semi-finished products valued at 91,320.8 million USD, consumer goods valued at 25,073.2 million USD, vehicles and transport equipment valued at 13,675.7 million USD and weaponry, equipment and other products valued at 554.5 million USD, equating to a 30.4 percent, 8.1 percent, 18.7 percent, 6.4 percent, 4.5 percent and 51.4 percent growth respectively.

Source of Imports

Import ratio classified into key import markets



Source: Ministry of Commerce

In 2017, Thailand's key import markets were ASEAN (9 countries), China, the U.S., EU and Japan accounted for 68.8 percent of overall imports. Compared to the previous year, import value from most of key markets increased, especially from the U.S. which had the highest import value of 23.5 percent, followed by EU, ASEAN, China and Japan which had the import value of 13.9 percent, 13.6 percent, 10.8 percent, and 4.5 percent respectively.

Export Trends

Exports in 2017 have been growing since March 2017, resulting in the export value grew by 9.9 percent for 2017 (the highest growth in six years) due to recovery of the global economy and trade reflecting on the economic statistics of major trading partners such as China, the U.S. and Japan continued to grow. As a result, demand for many commodities improved, especially electronics, vehicles and electrical appliances. Furthermore, oil price began to rise in response to global demand. This contributed to exports of oil-related products such as petroleum products, plastic pellets and chemicals. Export outlook in 2018 is expected to grow continuously due to the recovery of the global economy and world trade. The Ministry of Commerce forecasts that exports will expand in the range of 6 - 6.5 percent. However, the uncertainties of trade policy from major trading partners, exchange rate fluctuations and international political conflicts are still factors to be monitored.



The World Economy in 2017

"The world economy grew continuously. Exports and the manufacturing sector remained growing whereas inflation, interest rates and unemployment rates remained low. ""

Summary of Key Countries' Economic Indicators in 2017

	Growth (%YoY)						
	GDP	Inflation	MPI	Export	Import	Unemp.Rate	Policy Rate
US	↑ 2.2	↑ 2.1	↑ 1.3	↑ 6.6	↑ 7.1	At 4.4	At 1.25-1.5
China	↑ 6.9	↑ 1.6	↑ 6.6	↑ 6.7	↑ 15.9	At 3.9	At 4.35
Japan	↑ 1.8 ^a	↑ 0.5	↑ 4.7	↑ 11.8	↑ 14.0	At 2.8	At 0.10
South Korea	↑ 3.1	↑ 2.0	↑ 0.6	↑ 15.8	↑ 17.8	At 3.7	At 1.50
Singapore	↑ 3.5 ^a	↑ 0.6	↑ 10.1	↑ 10.4	↑ 12.2	At 2.2	At 5.28
Thailand	↑ 3.9 ^a	↑ 0.7	↑ 1.6	↑ 9.9	↑ 14.7	At 1.0	At 1.50

Source: Gathered from www.ceicdata.com, www.imf.org, www.nesdb.go.th, www.singstat.gov.sg

Note: ^a forecasted figure

The global economy in 2017 was forecasted by the IMF to grow by 3.7 percent, up from the 3.2 percent growth in 2016. Overall, the global economy recovered with many economies expanding from 2016. The economies of other countries grew relatively low in the first half of 2017, but gradually recovered following global economic recovery and exports which grew from increased demand for goods in the global market. As a result, the manufacturing sector of each country increased compared to the previous year and unemployment remained low.

The confidence in domestic economic and financial recovery, resulted in some countries adjusting their policy interest rates at the end of 2017. The Central Bank of South Korea adopted the policy interest rates to 1.50 percent from 1.25 percent (the first policy interest rate increased in 6 years since June 2011), and the U.S. Federal Reserve raised interest policy rates by 0.25 percent from 1.00 - 1.25 percent range to 1.25 - 1.50 percent range. However, most countries still maintained policy rates for economic stability and inflation to stay at target levels. For the world economy in 2018, the IMF projects a 3.9 percent growth, whereas the Office of the National Economic and Social Development Board expects the Thai economy to expand in the 3.6 - 4.6 percent range and the average inflation in the range of 0.9 - 1.9 percent.

Situation of the global oil prices tended to rise continuously. Dubai crude oil price in December 2017 was USD 61.6/barrel; compared to December 2016, oil prices were USD 52.1/barrel. For 2017, the average Dubai crude oil price was USD 53.2/barrel, increased from 2016 with an average price of USD 41.3/barrel. In 2018, the Dubai crude oil price is projected by Thai Oil PCL to increase from 2017, fluctuating between USD 55 – 60/barrel, supported by rising oil demand from the global economic recovery and cooperation between OPEC and non-OPEC producers on consensus to extend the capacity reduction period. The NYMEX crude oil price for March was USD 64.5/barrel, supported by the global economic growth which resulted in increased demand for oil, and because OPEC producers will reduce production capacity until the end of 2018. However, the next OPEC meeting will be in June 2018, which will assess the impact on oil prices and oil inventory in the market from lowered production.

However, there are still factors that need to be monitored, such as the implementation of the U.S. policies, for instance the reform of tax systems, the Fed's interest rate adjustment in 2018, the impact of BREXIT which should start to become clearer, exchange rate fluctuations and international political conflicts, whereby the different factors may affect global economic growth.

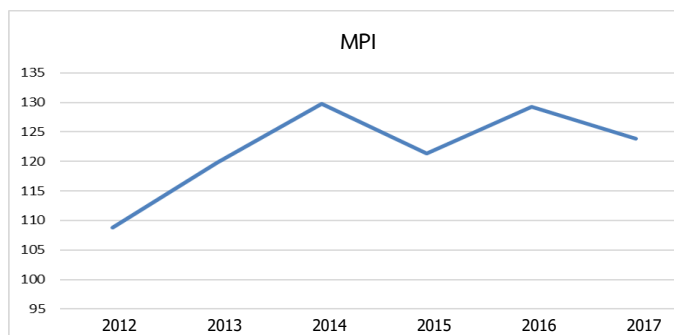


Thai Industrial Sectors in 2017 and Outlook for 2018

Iron and Steel Industry

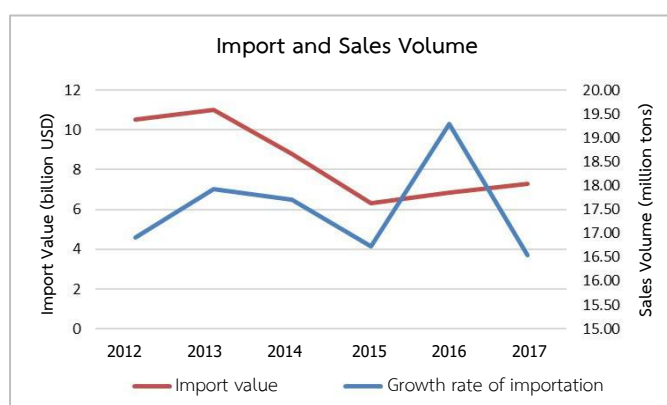
The MPI for 2017 dropped slightly from 2016. Long-formed steel's MPI decreased due to a slowdown in construction, whereas flat-formed steel's MPI, remained stable. This was due to continuing industries such as automotive industry, of which the production remained on the rise. Meanwhile, the MPI of chromium-plated steel dropped as the canned seafood industry's production decreased.

MPI



Source: Iron and Steel Institute of Thailand

Import and Sales Volume



Source: Iron and Steel Institute of Thailand

Production in 2017 reached an MPI of 123.84, a 4.16 percent drop from last year. The MPI of long-formed steel dropped by 8.55 percent whereby round and deformed bars dropped by 17.10 percent and 10.31 percent in production respectively, as the construction industry slowed down. The MPI of flat-formed steel dropped by 1.23 percent, whereby chromium-plated steel dropped by 23.36 percent as continuing industries, such as the canned seafood industry had less production. On the other hand, galvanized steel sheets grew by 14.50 percent, from use in the automobile industry.

Sales in 2017, reached a volume of 16.54 million tons, a drop by 14.20 percent from last year, whereby long-formed bars dropped by 25.7 percent. Products that dropped in sales were rebars and structural steel by 34.4 percent due to the slowdown in construction, while flat-formed steel dropped by 6.7 percent. The product that dropped in sales was chromium-plated steel by 19.6 percent.

Imports in 2017 valued at 7.29 billion USD, a 6.29 percent growth from last year. Flat-formed steel increased by 12.55 percent. The products of which the imports increased were cold-rolled carbon steel by 57.46 percent. The product thereof from Japan accounted for 55 percent of the total imports, which was to be used in the automobile industry. Following this were tin-coated steel which grew by 26.98 percent for use in the canned fruit industry. The import of long-formed steel grew by 11.96 percent. The product thereof that had the highest import was steel rods growing by 21.29 percent.

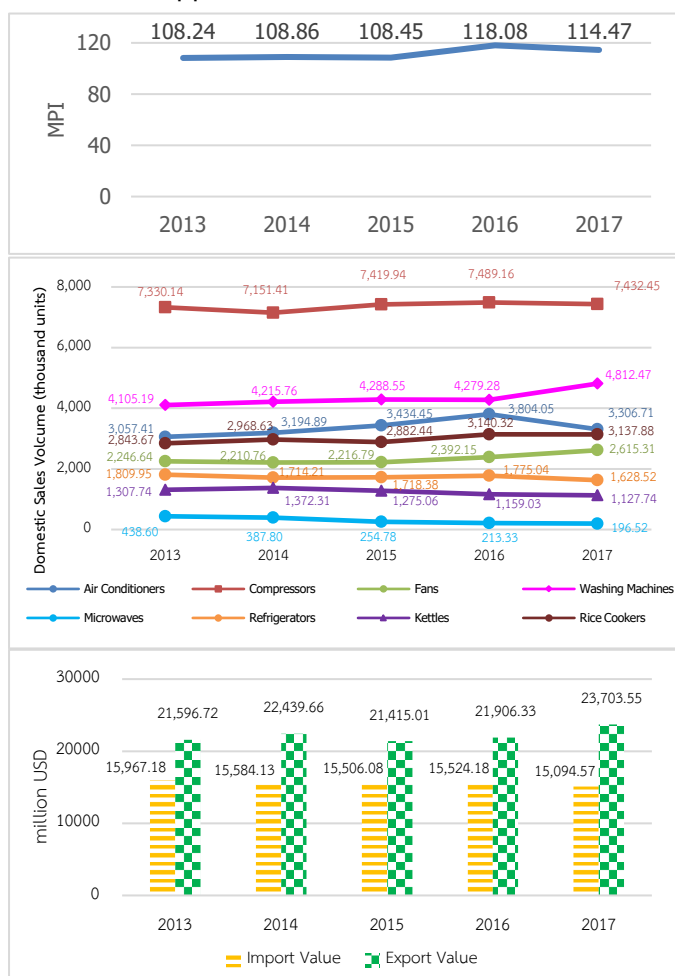
Iron and Steel Industry Outlook for 2018

The 2018 MPI for steel is projected to increase slightly by 2 percent from last year as a result of large-scale public investment in mass transit systems, high-speed trains, double-track railway lines, development on the Eastern Economic Corridor (EEC) and private construction which is projected to grow. Consumption in 2018 is expected to reach 17.02 million tons, equating to a 3 percent growth.

Electrical Appliance Industry

In 2017 Production of electrical appliances including air conditioners, compressors, fans, refrigerators, microwaves, kettles and rice cookers dropped by 3.06 percent from 2016 as a result of lower domestic demand and less orders from overseas. On the other hand, circuit protection equipment and components, switch boards and control panels and refrigerators increased in export value to the US, China, EU, Japan and ASEAN markets.

MPI, Domestic Sales Volume, Import and Export Value of Electrical Appliances



Source: Office of Industrial Economics

Imports of electrical appliances in 2017 valued at 15,094.57 million USD, a 2.77 percent drop from last year. Products that declined in imports were compressors and components valued at 760.07 million USD, power generators valued at 659.93 million USD, equating to a 5.51 percent and 39.02 percent drop respectively. On the other hand, electrical circuit protection devices and components valued at 1,911.14 million USD, equating to a growth of 5.04 percent from last year.

Production of electrical appliances in 2017 reached an MPI of 114.47, a drop by 3.06 percent. Most products decreased in MPI including air conditioners, compressors, fans, microwaves, kettles and rice cookers by 12.47 percent, 6.21 percent, 15.40 percent, 8.14 percent, 6.91 percent and 5.51 percent respectively. This was mainly due to lower domestic demand and less orders from overseas. Meanwhile, products that grew were washing machines, electrical wires and motors by 25.59 percent, 7.59 percent and 9.01 percent from last year respectively.

Domestic sales in 2017 mostly dropped from last year. Products that decreased were air conditioners, compressors, refrigerators, microwaves, kettles and rice cookers by 13.07 percent, 0.76 percent, 8.25 percent, 7.88 percent, 2.69 percent and 0.08 percent respectively. Exceptions were household fans and washing machines which grew by 9.33 percent and 12.46 percent from last year.

Exports of electrical appliances in 2017 valued at 23,703.55 million USD, an 8.20 percent growth from last year from expansions in key export markets including the U.S., China, EU, Japan and ASEAN. The first 3 products with the highest export value were: 1) Electrical circuit protection devices and components valued at 1,673.17 million USD, equating to a growth of 16.88 percent 2) Switch boards and control panels valued at 1,656.81 million USD equating to a growth of 35.48 percent and 3) Refrigerators valued at 1,612.78 million USD equating to a growth of 5.25 percent, especially in the U.S. markets where growth was 285.96 percent. Meanwhile air conditioners had an export value of 4,198.79 million USD, a 2.35 percent drop from last year.

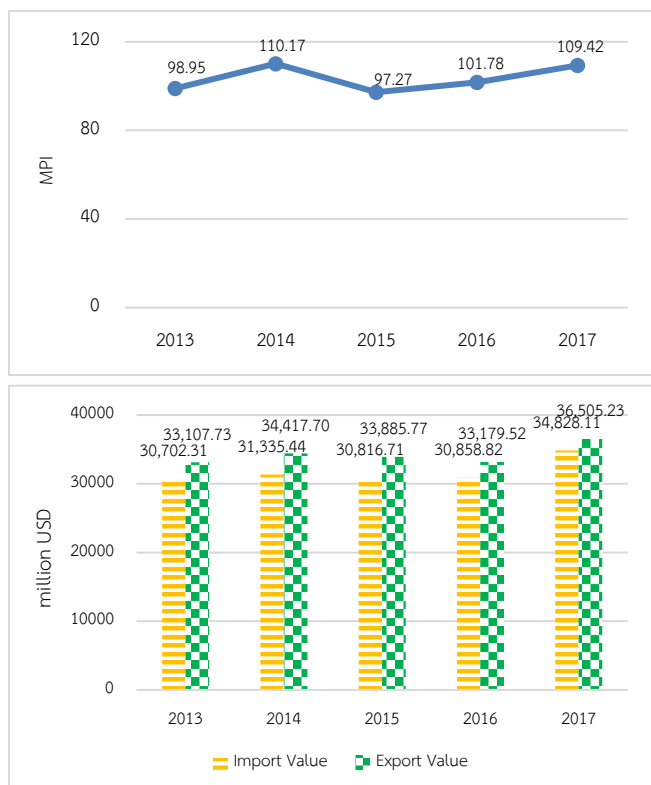
Electrical Appliance Industry Outlook for 2018

"Production and exports of electrical appliances in 2018 are expected to remain stable, with the minor growth of 1 percent and 3 percent from last year. This is a result of recovery in the domestic market and key markets, whereby products that are expected to grow are washing machines from increased orders from key trade partners, particularly the U.S. On the other hand, air conditioners are projected to slow down from a decrease in exports to the ASEAN markets due to high competition."

Electronics Industry

Production of electronics in 2017 grew by 7.51 percent when compared to 2016. The increase was in the product of semiconductors, ICs, HDDs and PCBAs as a result of increased global demand for electronic products. Export value increased to Japan, ASEAN, China, EU and the US markets.

MPI, Import and Export Value of Electronics



Source: Office of Industrial Economics

Import of electronics in 2017 valued at 34,828.11 million USD, a 12.86 percent growth from last year. Key products which grew were integrated circuits valued at 11,260.67 million USD and computer equipment and components valued at 4,496.25 million USD, equating to an 18.84 percent and 6.83 percent growth respectively.

Production of electronics in 2017 reached an MPI of 109.42, a 7.51 percent growth from last year. Products with growing MPI were semiconductors, HDDs, ICs and PCBAs by 14.78 percent, 16.24 percent, 8.84 percent and 1.95 percent respectively. This resulted from increased global demand for electronic products due to ICs are an essential component for advanced technology and are used in smartphones and tablets. In addition, there has been an increase in demand for ICs to manufacture HDDs which are developed for greater capacity for utilization in cloud storage.

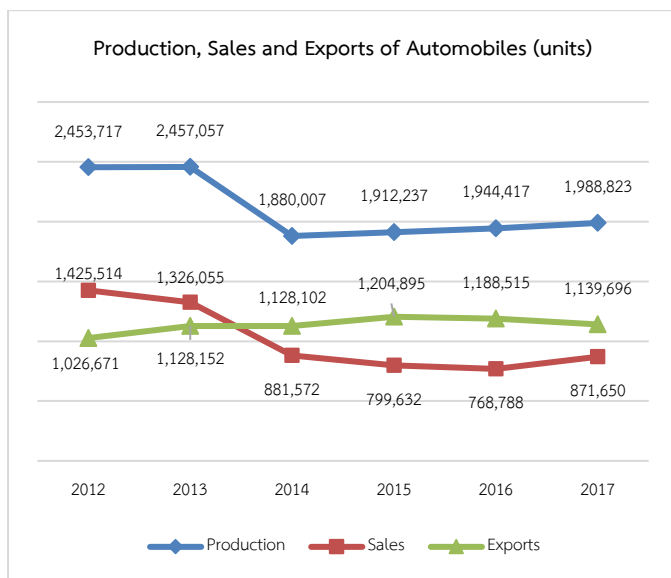
Exports of electronics in 2017 valued at 36,505.23 million USD, a 10.02 percent growth from last year. All key export markets grew including Japan, China, ASEAN, EU and the U.S. The export value of computer equipment and components valued at 14,358.12 million USD, ICs valued at 8,250.85 million USD and mobile phones and accessories valued at 2,079.73 million USD, equating to a growth of 7.01 percent, 7.66 percent and 120.71 percent respectively. Growth was particularly significant in Japanese and European markets.

Electronics Industry Outlook for 2018

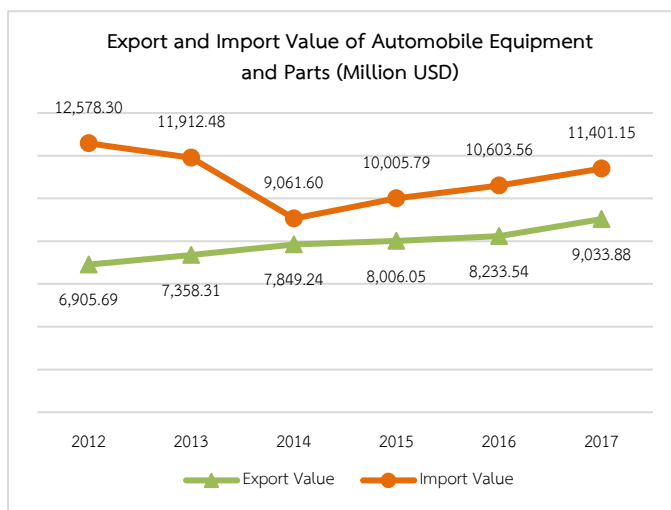
"The electronics industry in 2018 is expected to rise 5 percent in production and a 7 percent in export value to key markets from last year. ICs are projected to grow due to demand for ICs as a key component in the development of high-tech products and the use of smart phones and tablets where demand is increasing. "

Automobile and Parts Industry

The automobile industry in 2017 saw a growth in production from last year; a result of the growing domestic market in line with the growing domestic economy, consistent with the National Economic and Social Development Board's expectation that the Thai economy in 2017 would grow by 3.9 percent. This was coupled with the launch of new models to boost the domestic market. However, exports faced a slowdown in countries in Asia, the Middle East, Africa, Europe, Central America and South America.



Source: Office of Industrial Economics; data gathered from the Automotive Industry Club, The Federation of Thai Industries



Source: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs

Automobile Production

In 2017 (Jan - Dec), production of automobiles reached 1,988,823 units, a 2.28 percent growth from last year with 1,944,417 units. This consisted of 42 percent 1-ton pickup trucks, 56 percent derivatives, and 2 percent for other commercial vehicles.

Domestic Automobile Sales

In 2017 (Jan - Dec) sales reached 871,650 units, a 13.38 percent growth from last year with 768,788 units. Passenger cars accounted for 40 percent, 1-ton pick up trucks accounted for 41 percent, and PPVs and SUVs accounted for 14 percent, whereas other commercial automobiles accounted for 5 percent.

Automobile Exports

In 2017 (Jan - Dec) exports reached 1,139,696 units, a drop by 4.11 percent from last year with 1,188,515 units. Exports dropped in almost all markets except countries in Oceania and North America.

Export Value of Automobile Equipment and Parts

In 2017 (Jan - Dec) exports were valued at 9,033.88 million USD, compared to the same period last year where the value was 8,233.54 million USD, this was an increase by 9.72 percent. Key export markets for automobile equipment and components were Japan, Indonesia and Malaysia.

Import Value of Automobile Equipment and Parts

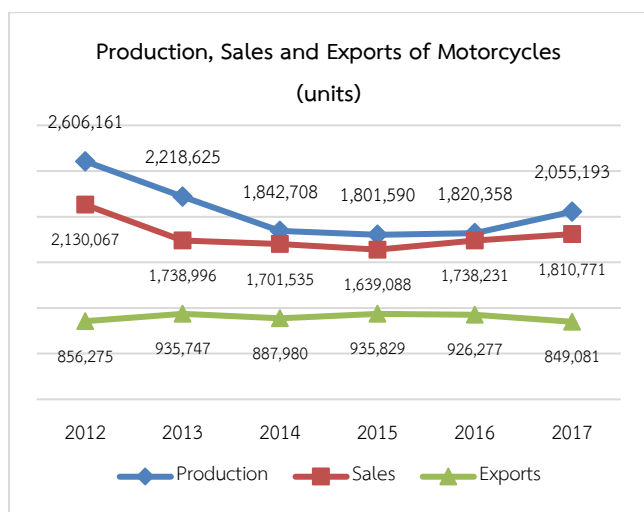
In 2017 (Jan - Dec) imports were valued at 11,401.15 million USD, compared to last year where the value 10,603.56 million USD, this was an increase by 7.52 percent. Key import markets for automobile equipment and components were Japan, China and the U.S.

Automobile Industry Outlook for 2018

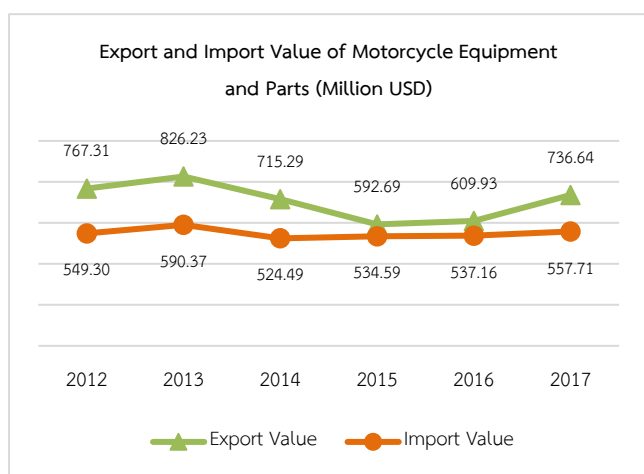
In 2018, the Automotive Industry Club from the Federation of Thai Industries expects the automobile industry to manufacture approximately 2,000,000 units, an increase of 2.56 percent. From the total number of units produced, approximately 900,000 units will be sold in domestic markets equating to a 3.25 percent increase, whereas 1,100,000 units will be exported. This is consistent with the Office of the National Economic and Social Development Board's forecasts that the GDP in 2018 will grow 3-4 percent, whereby the export market is projected to have a positive trend in line with the global economic recovery.

Motorcycle and Parts Industry

Production in the motorcycle industry in 2017 grew from last year as a result of increased domestic demand. Exports on the other hand slowed down.



Source: Office of Industrial Economics; data gathered from the Automotive Industry Club, The Federation of Thai Industries



Source: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs

Motorcycle Production

In 2017 (Jan - Dec), production of motorcycles reached 2,055,193 units, a 12.90 percent growth from last year which was 1,820,358 units.

Domestic Motorcycle Sales

In 2017 (Jan - Dec) sales reached 1,810,771 units, a 4.17 percent growth from last year which was 1,738,231 units.

Motorcycle Exports

In 2017 (Jan - Dec) exports reached 849,081 units (exports of CBU and CKD were 368,358 and 480,723 units respectively) an 8.33 percent drop from last year where exports were 926,277 units.

Export Value of Motorcycle Parts

In 2017 (Jan - Dec) exports valued at 736.64 million USD, a 20.77 percent growth from last year where the value was 609.93 million USD. Key export markets for equipment and parts were Cambodia, Vietnam and Japan.

Import Value of Motorcycle and Bicycle Equipment and Parts

In 2017 (Jan - Dec) imports were valued at 557.71 million USD, a 3.83 percent growth from last year where the value was at 537.16 million USD. Key import markets for motorcycle equipment and components were Japan, China and Vietnam.

Motorcycle Industry Outlook for 2018

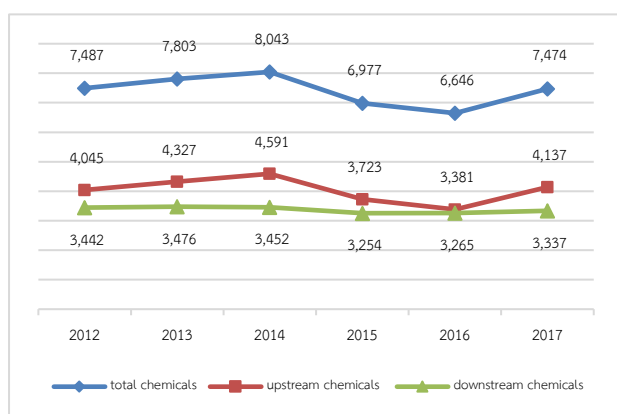
Estimation of motorcycle industry for 2018 is projected to manufacture 2,200,000 units, equating to an increase of approximately 10 percent, due to the positive trend in both the domestic and global economy. From the total number of units produced, around 85-90 percent is expected to be for domestic sales and 10-15 percent for exports.

Chemical Industry

Overall trade in chemical products increased in the value when compared to 2016. Export value grew by 10.69 percent and imports grew by 13.09 percent. This was consistent with the recovery of trade partners such as China, Japan, and ASEAN countries which continued to expand. For 2018, overall trade in chemicals is projected to increase in value by around 3 percent, in line with domestic economic growth. Supporting factors are growth in the food and automobile industry which will help the expansion of the chemicals trade further.

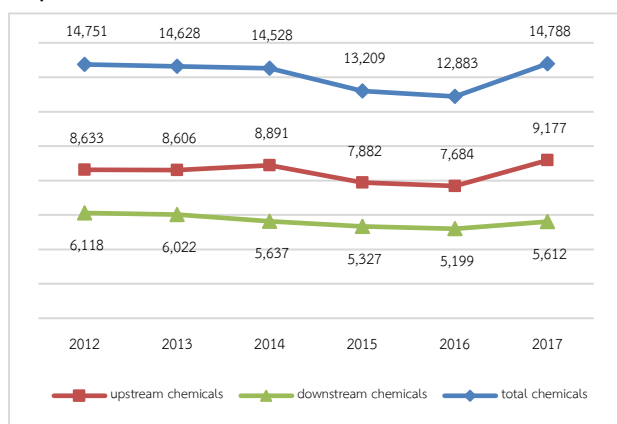
Marketing and Sales

Export Value of Chemicals (million USD)



Chemicals exports in 2017 reached a value of 7,474 million USD, a 10.69 percent (%YoY) growth from last year. This was divided into upstream chemicals valued at 4,136 million USD equating to a growth of 18.59 percent and downstream chemicals valued at 3,338 million USD, equating to a growth of 2.22 percent. Key chemical products that contributed to the growth were inorganic chemicals (25.43 percent), paints (23.94 percent) and organic chemicals (23.28 percent). Export value grew from 2016 due to the recovery of the global economy, including economy of trade partners such as China, Japan, and ASEAN countries which continued to grow.

Import Value of Chemicals (million USD)



Source: Ministry of Commerce

Chemicals imports in 2017, reached a value of 14,788 million USD, a 13.09 percent (%YoY) growth from 2016. This was divided into upstream chemicals valued at 9,176 million USD equating to a growth of 16.49 percent and downstream chemicals valued at 5,612 million USD, equating to a growth of 7.94 percent. Key chemical products that contributed to the growth were miscellaneous chemicals (29.43 percent), chemical fertilizers (14.59 percent) and organic chemicals (13.59 percent). Import value of upstream chemicals increased in line with export growth.

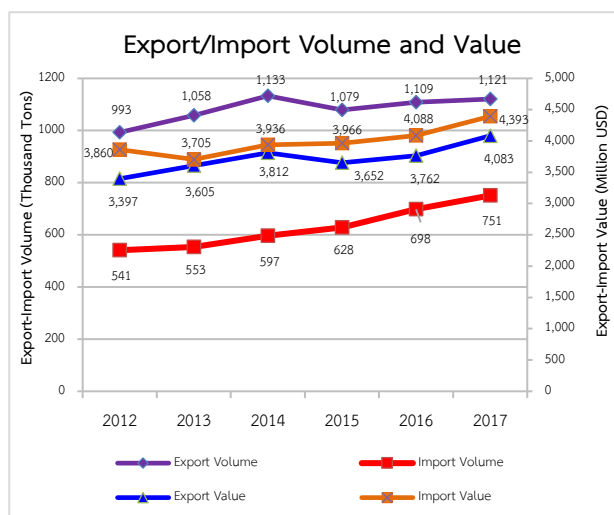
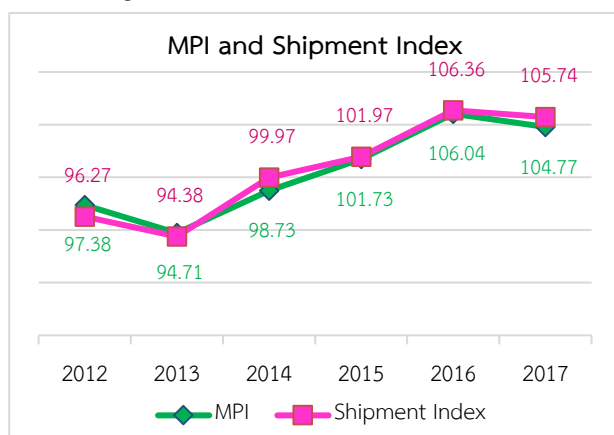
Chemical Industry Outlook for 2018

Chemical industry outlook for 2018 is expected to reach an export value of approximately 8,105 million USD and an import value of approximately 15,211 million USD, equating to a growth of around 3 percent, in line with the direction of domestic economic growth which is expected to rise at approximately 4 percent. This is supported by government stimulus measures, growth of the food and automobile industry which will help push the trade of chemicals upwards.

Plastics Industry

The plastics industry in 2017 grew from last year due to the recovery of the world economy and trade partners, especially in Asia and ASEAN. This was coupled with increased global oil prices. As a result, export value grew compared to past years, whereas the volume of exports increased slightly.

Marketing and Sales



MPI and Shipment Index in 2017 dropped by 1.20 percent and 0.58 percent respectively from last year. Categories of product that significantly lowered both indices were tableware, kitchen and bathroom products, which accounted for 18.02 percent and 12.26 percent; and plastic sheets by 9.70 percent and 9.56 percent respectively.

Export volume in 2017 reached 1,121,447 tons, a 1.13 percent growth from last year, from exports of conveyor or packaged goods (3923) and sheet, thin sheets, film, foil and other non-cellular products (3920).

Import volume in 2017 reached 750,982 tons, a 7.53 percent growth from last year, from imports of plastic flooring (3918), household goods (3924), goods used for conveyor belts or packaging (3923) and sanitary ware (3922).

Export value in 2017 reached 4,083 million USD, an 8.52 percent growth from last year, from exports of others plastic products (3926), sheets, thin sheets, film, foil and other non-cellular products (3920) and conveyor belts and packaging (3923).

Import Value In 2017 imports reached 4,393 million USD, a 7.48 percent growth from last year, from imports of plastic flooring (3918), and conveyor belts or packaging (3923).

Source: 1. Thai Customs Department, Ministry of Finance

2. Industrial Economic Information Center, Office of Industrial Economics

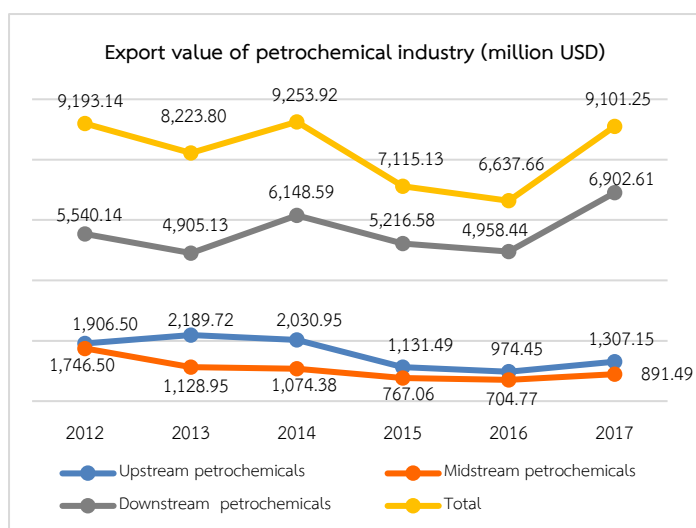
Plastics Industry Outlook for 2018

The plastics industry in 2018 is projected to have a good trend in terms of volume and value from supporting factors including growth in the global economy and trade. The Fiscal Policy Office expects growth of the Thai GDP in the 3.7-4.7 percent range or an average of 4.2 percent. This is coupled with leading worldwide producers of plastics using Thailand as a manufacturing base with the investment trend increasing. Furthermore, domestic purchasing power recovery has been recovered resulting in the rise of export volume and value. However, export value may fluctuate with new exchange rates in 2018.

Petrochemical Industry

In 2017, the petrochemical industry fluctuated in naphtha prices within Asia, according to the adjustment of crude oil prices in the world market. The overall trend projected upwards, whereby it is expected that the growth is consistent with the economic growth in Asia.

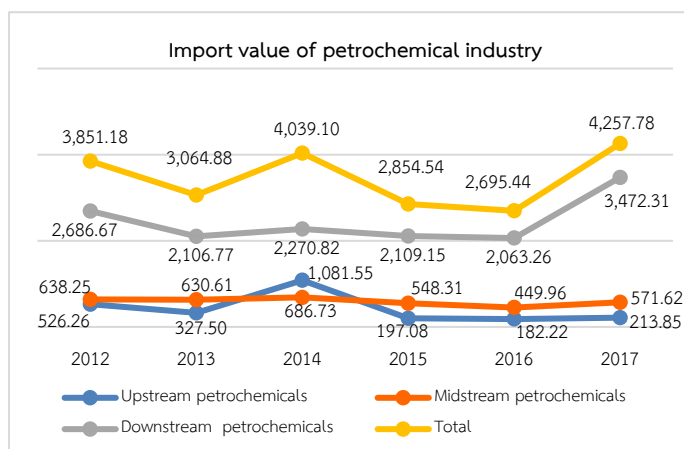
Marketing and Sales



Export value in 2017 reached 9,101.25 million USD, a 37.11 percent growth from last year (%YoY)

Import value in 2017 reached 4,257.78 million USD, a 57.96 percent growth from last year (%YoY)

The main reason for the increased export and import value is due to increased crude oil prices, political stability of the manufacturing countries in different regions and economic status of major trade partners, especially in ASEAN and China which grew.



Product price in 2017 saw prices of ethylene and propylene in the Asian market average at 37.04 and 28.16 Baht per kilogram respectively. Compared to 2016, ethylene and propylene prices increased from 36.95 and 25.00 Baht per kilogram.

For PE and PP plastic pellet prices in 2017, plastic pellet prices (average in SE Asia CFR) of LDPE, HDPE and PP were at 43.55, 39.83 and 39.74 Baht per kilogram respectively. When compared to the same period of 2016, the average price of LDPE and PP increased from 42.02 and 37.31 Baht per kilogram, whereas HDPE prices were down from 40.16 Baht per kilogram.

Source: Thai Customers, Ministry of Finance

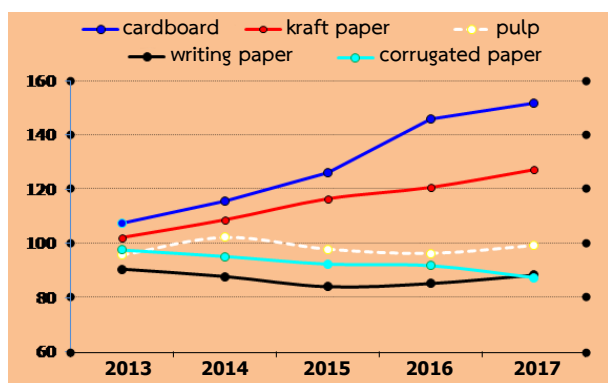
Petrochemical Industry Outlook for 2018

"The petrochemical industry in 2018 is expected to adjust with the growth of GDP and continuing industries. The Fiscal Policy Office projects a domestic GDP growth in the 3.7-4.7 percent range, averaging 4.2 percent (Ministry of Finance News No. 15/2018, dated 29 January 2018). Key factors that the industry must monitor are the fluctuations of crude oil prices, trade economics in Asia, the global economy and political stability of manufacturing countries in different regions."

Pulp, Paper and Print Media Industry

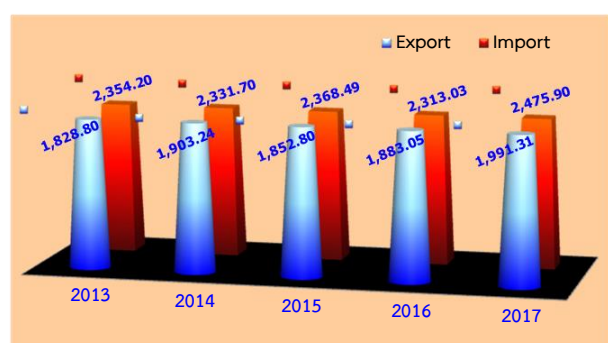
The pulp, paper and print media industry in 2017 increased in the production of pulp, writing paper, cardboard and kraft paper compared to last year. The majority of these were produced for use in the industrial sector, with continued increase in domestic consumption, as well as in other key industries such as food and beverages, cosmetics, medicines and pharmaceuticals.

MPI in Pulp, Paper and Print Media Industry



Source: Office of Industrial Economics

Export-Import of Pulp, Paper and Print Media



Source: Information and Technology Communication Center, Ministry of Commerce

😊 **Paper production** in 2017, increased in MPI from last year, from pulp, writing paper, cardboard and kraft paper which grew by 3.02 percent, 3.70 percent, 4.00 percent and 5.40 percent respectively. This was for production of packaging for use in continuing industries as domestic consumption has continuously increased resulting in the paper packaging industry responding to the trend. Furthermore, consumers in other key industries also grew including the food and beverage, automobiles, cosmetics, medicines and pharmaceuticals, resulting in a growing demand for paper packaging.

😊 **Exports of pulp, paper and print media** in 2017 valued at 1,991.31 million USD, a 5.75 percent growth from last year. This was from an increase in exports of pulp by 8.97 percent in chemical pulp to China and the Philippines. In paper and paper products, exports increased by 5.65 percent to South Korea and Indonesia, whereas exports of books and publication such as other types of printed media including books and stickers increased by 1.01 percent to key trading partners such as Hong Kong and Indonesia.

😊 **Imports of pulp, paper and print media** In 2017 valued 2,475.90 million USD, a 7.04 percent growth from last year. This was from an increase in imports of pulp, paper and products unable to be manufactured in Thailand, particularly recyclable papers and cardboards. On the other hand books and printed media dropped by 24.54 percent in imports from a favour towards digital forms of media, over other forms of printed materials.

Pulp, Paper and Print Materials Industry Outlook for 2018

In 2018, the pulp, paper and print media industry is expected to grow from 2017, in line with consumer demand in key industries, particularly paper packaging. Books and print media are foreseen to slowdown from changing consumer behavior, especially with social media playing a larger part with print media, both in terms of advertising and sales volume affecting print media exponentially. However, literature, novels, translated novels, children books and educational books are expected to continue growth.

Government Policy Related to the Pulp, Paper and Printed Materials Industry

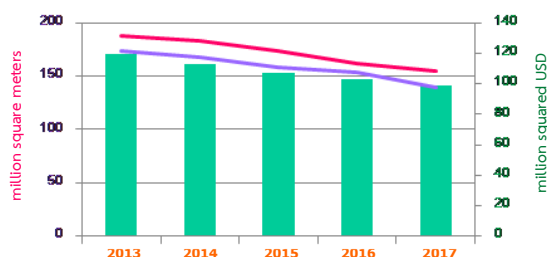
The 20-Year National Strategic Framework (2017-2036) and the 12th National Economic and Social Development Plan (2017-2021) is aimed at Thailand's economic stability, whereby promoting competitiveness of Thai businesses through innovation to add value and efficiency of production. Such policies hold opportunities and challenges for entrepreneurs to develop high-value products (for more details see <http://www.nesdb.go.th>).

Ceramics Industry

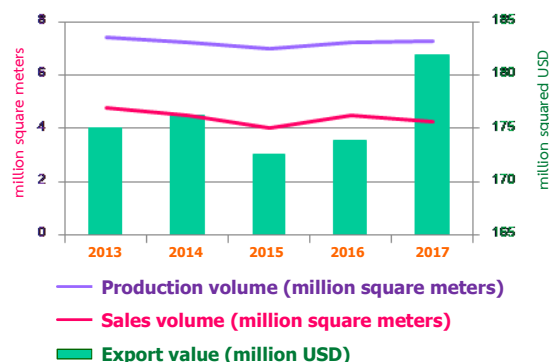
Production and sales volume of ceramics in 2017 continued to drop from competition with cheaper imports and more variations in quality to choose from. Exports of ceramic products increased in almost all products categories in Japan, US and ASEAN markets with sanitary ware having the highest growth rate. Meanwhile, tableware had the highest value from exports mainly to the US.

Ceramics Production, Sales, and Exports

Production, sales, and exports of wall and floor tiles



Production, sales, and exports of sanitary wares



Source: 1. Domestic Production and Sales: Industrial Economics Information Center, Office of Industrial Economics

Note: From the survey of 13 wall and tiling factories and 7 sanitary ware factories

2. Export Value: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs

😊 **Production** in 2017 for floor and wall tiles reached a production capacity of 140.37 million square meters, down 8.95 percent from last year (%YoY) due to high inventory. Meanwhile, Sanitary ware had a production volume of 7.30 million pieces, a 1.14 percent (%YoY) growth from last year, in line with domestic and overseas orders.

😬 **Sales** in 2017 for floor and wall tiles reached a sales volume of 155.89 million square meters, down 4.25 percent from last year (%YoY), whereas sanitary ware reached 4.27 million pieces, down 5.55 percent from last year (%YoY).

😊 **Exports** in 2017 for floor and wall tiles valued at 99.65 million USD, down 3.95 percent from last year (%YoY) due to lower purchase orders from Laos and Myanmar. Exports of sanitary ware valued at 181.89 million USD, a 4.62 percent growth from last year (%YoY) from increased exports to China by 68.44 percent, a major export market after the U.S. and Japan.



Ceramics Industry Outlook for 2018

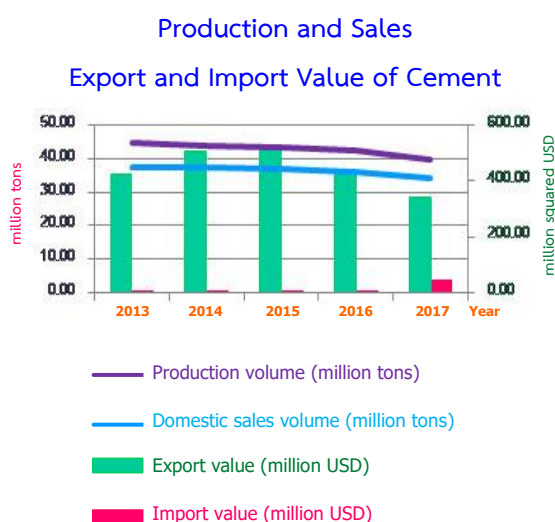
In 2018, production and sales of ceramics is expected to grow to support increased exports to the U.S., Japan and ASEAN markets, as well as the growth of the Thai and global economy which has improved consistently. These will boost investment in the business and private sector, increasing the peoples' income base. The people will also be able to repair households and thus the ceramics market is projected to grow accordingly.

Government Policy Related to the Ceramics Industry

The investment in the Eastern Economic Corridor (EEC) will be supported by the government and other incentives such as tax incentives and facilitation by various departments to become the production base of high-value goods. This is aimed to increase competitiveness and expand new market channels.

Cement Industry

Compared with the previous year, production and sales in the cement industry shrank in 2017 due to the economic conditions that resulted in less foundation consumers and high competition. Export value dropped as major Thai businesses set up production bases in Myanmar and Laos which has started production in their countries, and import value increased significantly from cheaper cement from Laos.



Source: 1. Domestic Production and Sales: Office of Industrial Economics Information and Indexes, Office of Industrial Economics (OIE)(Forecasts)

2. Export-Import Value: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce and forecasts by OIE

Cement production in 2017(excluding clinker) dropped by 6.58 percent from last year, a result of the affects from the domestic economy recovery still not reaching the people at the foundation level. This was coupled with infrastructure construction in the government sector, an important economic stimulus which did not meet targets.

Domestic sales of cement in 2017 (excluding clinker) dropped by 5.73 percent from last year as the people had low purchasing power and the competitiveness of the domestic market was high; banks become stricter to lend residential loans; real estate was in surplus; infrastructure construction that were unable to progress or new projects were still not at the point that needed cement; and purchasing for public projects were delayed.

Cement export and import in 2017 (excluding clinker) dropped by 19.84 percent from last year, from a decline in purchasing orders from Myanmar and Laos since the

beginning of the year. Export value of cement dropped in 2017 since major Thai businesses set up cement production bases in the two countries and started production, in addition to the slowdown of the Asian cement market. Meanwhile, import value increased by 619.59% from import of cheap cement from Laos.

Cement Industry Outlook in 2018

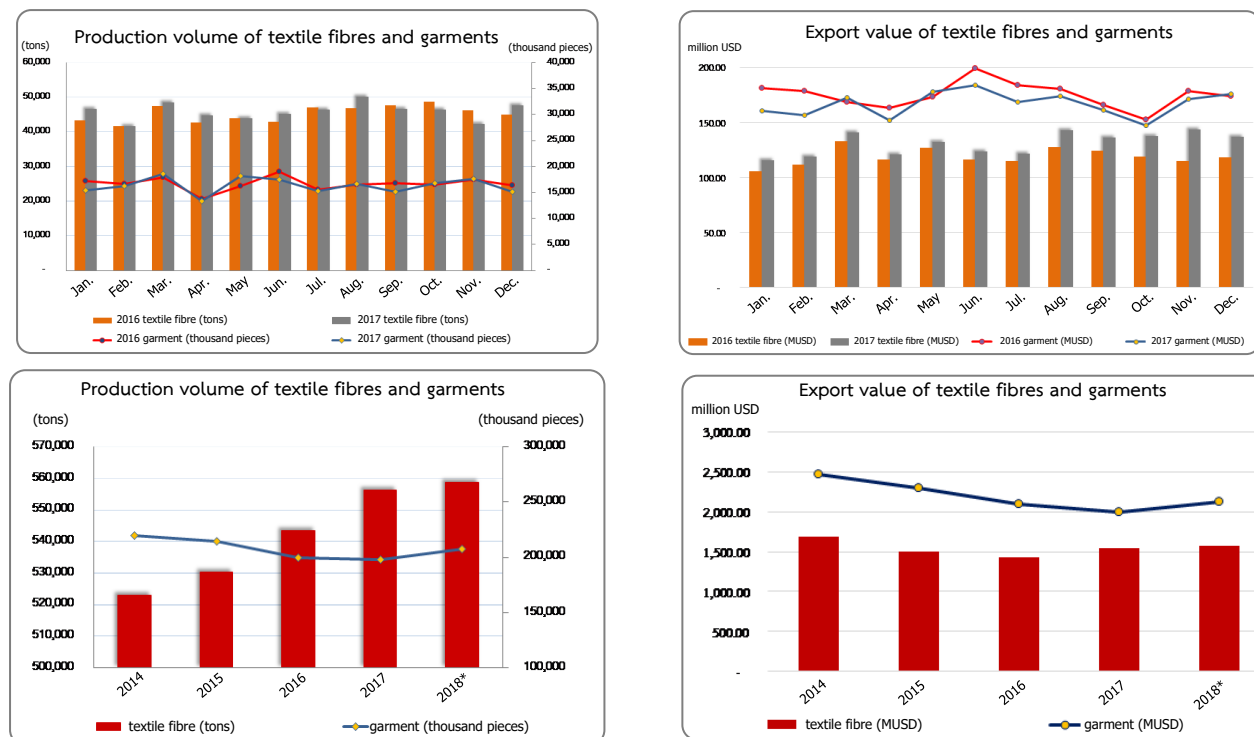
In 2018, the production and sales of cement is expected to grow slightly from the recovering global economy. If the progress in the government's existing infrastructure projects can continue in line with plans for both existing and new projects, this will significantly boost domestic demand for cement.

Government Policy Related to the Cement Industry



The government has policies to accelerate large infrastructure investments, especially mega projects, as well as increasing investment in public utility and transport infrastructure projects in the Eastern Economic Corridor (EEC) and have established clearer time frames.

Textile and Garment Industry



Production

➕ *Textile fiber* products grew by 2.4 percent from last year as specialty fibers such as collagen and composite fibers were highly demanded by trade partners and the BOI approved the promotion of specialty fibers, which was one of the potential industries in line with government policies, and was also approved for investment leading to increased production.

➖ *Fabrics and apparel* dropped by 0.6 and 0.8 percent respectively, from decreased production of woven products (cotton) consistent with market demand. Apparel dropped because production of OEM garments moved to CLMV countries, which received GSP privileges from the U.S. and EU.

Domestic Sales

➖ *Textile fibers, fabrics and apparel* dropped by 3.9 percent, 4.2 percent and 0.8 percent respectively, partially from no growth in domestic consumption as households remained high in debt. Although there was spending stimulus at the end of the year, consumer confidence had not recovered from doubts about economic fluctuations as the Thai economy had not given a clear signal of recovery.

Exports

➕ *Textile fibers and fabrics* grew by 10.0 percent and 6.2 percent in value, whereby textile fibers grew consistently since the ending of 2016. Export products were specialty fibers and fabrics made from specialty fibers, which Thailand has potential in production and exports. Key markets were China, Indonesia, Vietnam, Turkey and Bangladesh.

➖ *Garments* dropped by 4.6 percent, especially in key markets such as the U.S. and EU, which Thailand is at a disadvantage in terms of GSP. However, exports of apparel to ASEAN had good growth.

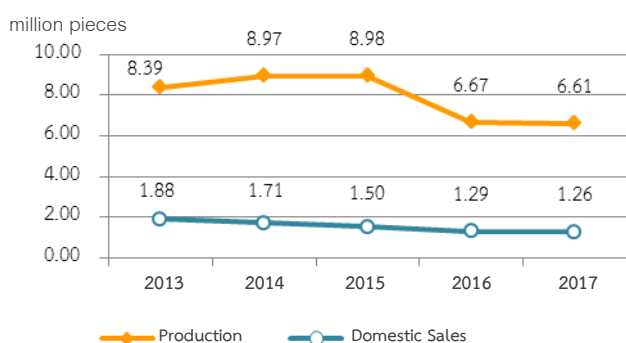
Outlook for 2018

➕ Overall the production of textile fibers and apparel are expected to grow in the same direction as exports which is projected to grow with the economies of trading partners such as China, Japan and Vietnam, especially in exports of fibers and fabrics to CLMV countries which are key global production bases for the world. Furthermore, production is expected to increase to support domestic sales which is projected to grow from public and private investment; a supporting factor to improve consumer confidence.

Wood and Wooden Furniture Industry

Domestic production and sales of wooden furniture in 2017 slowed down from 2016 as the economy was slow recovery, and the cost of living and household debt remained high; as a result, consumer spending remained slow. This was a factor that the wood and furniture industry was not able to grow as expected. The value of exports of wood and wood products in 2017 increased from 2016 in line with the continuing world economic growth such as in China, Japan and the US.

Domestic Production and Sales of Wooden Furniture (million pieces)

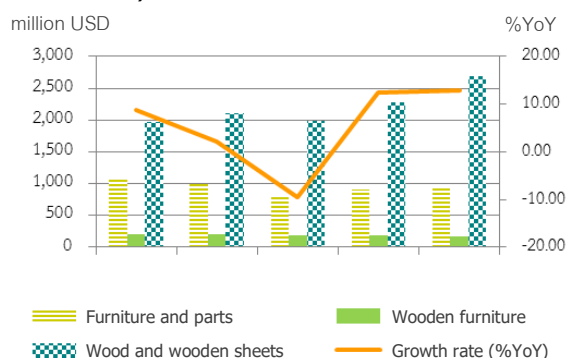


Source: Office of Industrial Economics

😊 **Production of wooden furniture** in 2017 reached 6.61 million pieces, a 0.90 percent drop from 2016 from the economic recovery resulting in the wood and wooden industry unable to full recover.

😊 **Domestic sales of wooden furniture** in 2017 reached 1.26 million pieces, a 2.33 percent drop from 2016. The slowdown was in line with consumer purchasing power, with living costs and household debt still high, and a slowdown in the domestic real estate industry. In the past, the domestic wooden furniture market has seen a consistent slowdown.

Export Value of Wood and Wooden Products (million USD)



Source: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs

😊 **Export of wood and wooden products** in 2017 reached 3,806.07million USD, a 12.99 percent growth from 2016. Exports were classified into 3 product groups that were 1) Furniture and parts 2) Wooden products and 3) Wood and wood planks which valued 938.92, 168.50 and 2,698.65 million USD respectively. Exports in wood and wood planks had good growth, especially to China, South Korea and Saudi Arabia.

Wood and Wooden Furniture Industry Outlook in 2018

The production and sale of wooden furniture in 2018 is expected to grow from 2017, due to stimulus of production to support exports that are projected to grow more than in 2017, as well as government policies stimulating the economy that continue to be the main driving force in the domestic economy. This is consistent with the export of wood and wooden products in 2018 which is expected to grow in accordance with the economic status of major trade partners such as China, Japan and the U.S., where the trend has increased continuously.

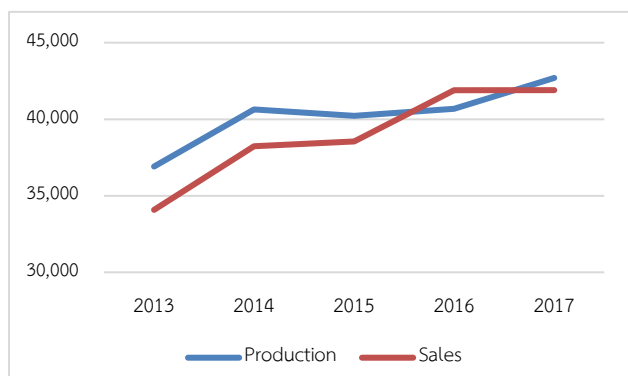
Government Policy Related to the Wood and Wooden Furniture Industry

The Royal Forest Department is in the process of implementing the Strategy and Plan for the Promotion of an Integrated Wood Economy 2018-2036, with the objective of overseeing the entire economy of timber and enhancing the forest certification system or FSC, for exports to countries that focus on conservation of forest resources such as in Europe, the U.S. and Japan, etc.

Pharmaceutical Industry

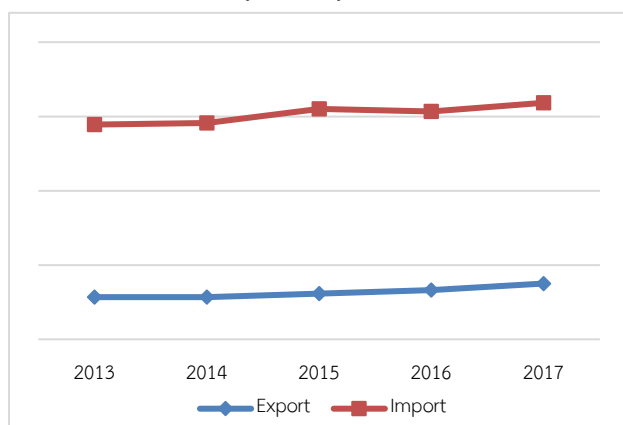
Domestic production and sales volume of pharmaceuticals in 2017 increased from last year due to the expansion of both domestic and export markets in ASEAN, especially Vietnam, Myanmar and Cambodia.

Domestic Production and Sales (tones)



Source: Office of Industrial Economics

Pharmaceuticals Import-Export Value (Million USD)



Source: Ministry of Commerce

Manufacture of pharmaceuticals in 2017 reached a volume of 42,695.73 tons, a 4.93 percent growth from last year. Production of tablets, liquid medicines, capsules, injections, and creams increased consistent with increased orders as major powdered drug producers were still in the process of improving production, thus the volume of production was not consistent each month.

Pharmaceutical sales in 2017 reached a volume of 41,898.81 tons, a 0.02 percent growth from last year. Overall, domestic drug sales grew at a relatively slow rate, whereby tablets, capsules, injections, creams and powdered drugs grew. On the other hand, sales of liquid medicines dropped as some major producers have less orders from public hospitals.

Pharmaceutical exports in 2017 reached a value of 375.24 million USD, a 13.39 percent growth from last year, due to expansion of ASEAN markets, especially Vietnam, Cambodia, the Philippines and Indonesia. Imports of pharmaceuticals valued at 1,591.80 million USD, a 3.77 percent growth from last year. Most of the imports were from France, UK, Puerto Rico, Spain and Switzerland. Imports of inexpensive medicines from India and China accounted for 10.45 percent of the total import value of Thai pharmaceuticals.

Pharmaceutical Industry Outlook for 2018

Production of pharmaceuticals in 2018 is expected to continue growth in line with both domestic and international expansion, especially in Vietnam and Myanmar which are the main export markets for Thai pharmaceuticals.

Government Policies Related to the Pharmaceutical Industry

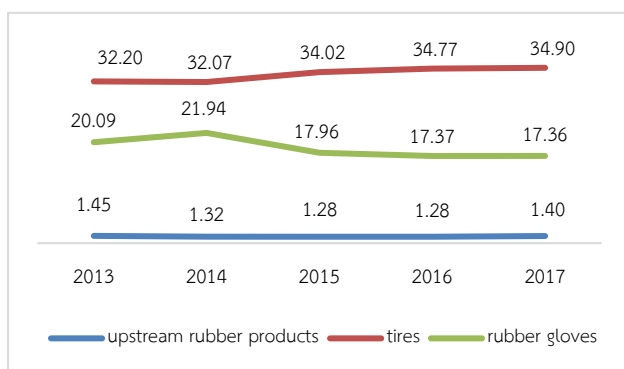


The Ministry of Finance enacted the ministerial regulation on packaging that the government would like to promote or support, and set out methods of purchasing packaging by selection and specific methods B.E. 2560 (2017), dated 23 August 2017. While it was unclear on how procedures would adhere to the said ministerial regulation, public hospitals slowed down the purchase of medicines.

Rubber and Rubber Products Industry

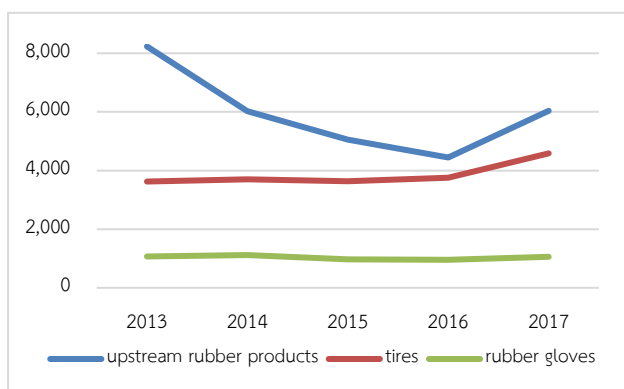
In 2017, the production volume of upstream rubber products and tires increased from last year, mainly from the growth of exports, especially in China and US. The production of rubber gloves dropped slightly, although both domestic and international markets expanded well.

Upstream Rubber, Tires and Rubber Glove Production
Volume (Million Tons/Million Tires/Billion Pieces)



Source: Office of Industrial Economics

Export Value of Upstream Rubber Products, Tires and
Rubber Gloves (million USD)



Source: Ministry of Commerce

Production of upstream rubber products, tires and rubber gloves in 2017 reached a volume of 1.40 million tons, 34.90 million tires and 17,362.03 million pieces respectively. Production of upstream rubber products and tires grew by 9.37 percent and 0.37 percent respectively, from growth of both domestic and foreign markets, whereas rubber gloves dropped by 0.05 percent from last year.

Sales of upstream rubber products, tires and rubber gloves in 2017 reached 147 thousand tons, 23.76 million tires and 3,047.66 million pieces respectively. Sales of upstream rubber products and tires dropped 9.54 percent and 1.37 percent from last year, due to lower prices of synthetic rubber and a slowdown in the tire market, whereas sales of rubber gloves grew by 54.92 percent due to higher medical demand.

Exports of upstream rubber products, tires and rubber gloves in 2017 reached a value of 6,033.394, 4,586.10 and 1,055.69 million USD respectively. Sales of upstream rubber products, tires and rubber gloves increased by 35.74 percent, 22.16, percent and 10.61 percent from last year due to a growth in China, Malaysia, Japan, The U.S. and South Korea for upstream rubber products and The U.S., Japan, Vietnam, Malaysia and China for tires and rubber gloves.

Rubber and Rubber Products Industry Outlook for 2018

The production of upstream rubber products, tires and rubber gloves in 2018 is expected to grow in line with the growth of foreign markets, particularly China which is a key export market for upstream rubber products and the U.S. for tires and rubber gloves.

Government Policies Relevant to the Rubber and Rubber Products Industry



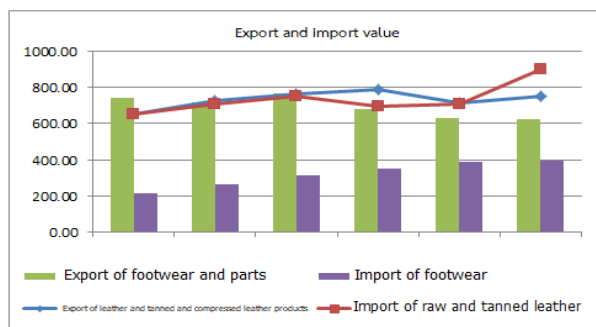
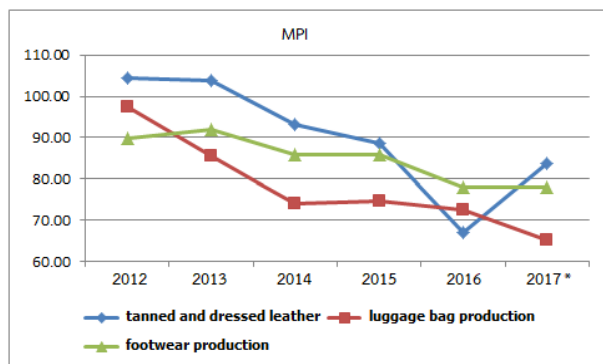
The Rubber Authority of Thailand is in the process of upgrading the quality of life for rubber farmers and the development of the rubber industry with 6 projects. Visit www.raot.co.th for details.

Footwear and Leather Products Industry

In 2017, tanning and dressing of leather grew by 22.70 percent from higher demand in the industrial sector where large operators increased investment in machinery to expand production capacity. Major markets for footwear and leather products included Vietnam, China, Hong Kong and Indonesia.

Production, Exports and Imports

(million USD)



Source 1.MPI– Office of Industrial Economics

2. Export and Import Value – Office of the Permanent Secretary of Commerce

*includes handbags and similar products, saddles and harnesses

Production

😊 The MPI of tanned and dressed leather in 2017 grew 22.70 percent compared to last year for exports by of major enterprises.

😞 The MPI of luggage bags* dropped 10.03 percent from last year, partially due to the slowdown in production as domestic and overseas orders slowed down.

😊 The MPI of footwear grew slightly by 0.38. percent from last year, from the increased overseas orders in the second half of 2017.

Exports-Imports

😊 Exports in 2017 reached a value of 1,660.81 million USD, a 2.10 percent growth from last year, a result from the export value on leather, tanned and compressed leather and luggage products which increased 3.95 percent and 2.44 percent due to consistent domestic and overseas purchase orders.

😊 Imports in 2017 reached a value of 1,699.98 million USD, a 11.93 percent growth from last year, from imports of raw and tanned leather for utilization in production which grew 22.35 percent. Key import markets were The U.S., Denmark and Argentina.

Footwear and Leather Products Industry Outlook 2018

Production of footwear and leather products in 2018 is expected to increase in tanning and dressed leather as the world economy recovers. Production of luggage and footwear products are expected to slow down. However, there are factors stimulating production such as growth of tourism from China, Malaysia and South Korea, coupled with government investments, purchasing stimulus initiatives from the government and the state welfare scheme which will result in a better overall economic status. For exports, it is expected that all leather, tanned and compressed leather and luggage products, and footwear and parts will grow in line with demand from CLMV countries, as a main contributing factor.

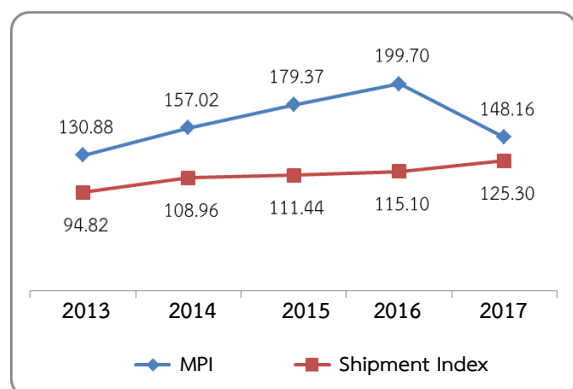
Government Policies Relevant to the Footwear and Leather Products Industry

The National Tourism Policy Committee (TPC) had a resolution to support tourism by promoting 2018 as the national tourism year with the campaign “Year of Sustainable Travel the Thai Way 2018” with the aim to be a good host and encourage and maintain the quality of tourists. Revenue from tourism in 2018 is expected to grow by 10 percent from 2017, equating to approximately 3 trillion Baht. The policy will stimulate the overall consumption of goods in the fashion industry well.

Gem and Jewelry Industry

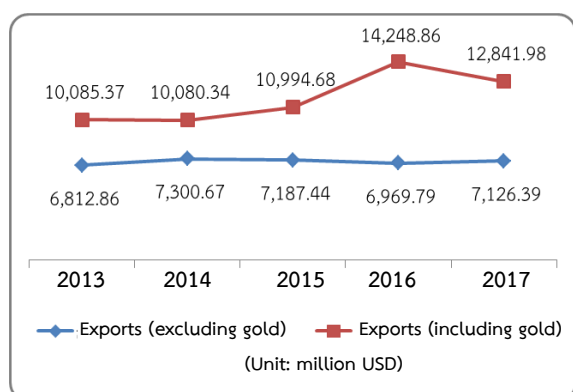
Production of gems and jewelry in 2017 shrank from last year, from exports of stock in replacement of newly produced products. Sales grew from consumers' preference to purchase goods via online channels, whereas exports (excluding gold) had a direction of growth from the export value of pearls and genuine silver and gold accessories.

Production, Sales and Exports



Source: Division of Industrial Information and Industrial Indices, Office of Industrial Economics

Note: 2011 is the average base and indexes have not been adjusted according to seasonal affects



Source: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs

Production of gems and jewelry in 2017 dropped by 25.81 percent from last year, as most businesses focused on exporting stocked products over newly produced goods.

Sales of gems and jewelry in 2017 grew by 8.86 percent from last year, especially through online channels which has become the preferred channel to purchase accessories among new consumer generations.

Exports of gems and jewelry (excluding gold) in 2017 grew by 2.25 percent from last year from the export value of pearls and genuine silver and gold accessories. However overall, the export value of gems and jewelry dropped by 9.87 percent in line with fluctuating global gold prices, which resulted in a decline in the export value of gold and gold products.

Gem and Jewelry Industry Outlook for 2018

Production of gems and Jewelry in 2018 is expected to increase from last year. This is partially due to increased demand in line with the global economic status which is expected to improve, resulting in boosted consumer confidence. Exports of gems and jewelry (excluding gold), it is expected to be relatively stable. Even though the demand for raw materials will decrease, consumers will tend to demand genuine diamond jewelry and artificial jewelry with unique designs.

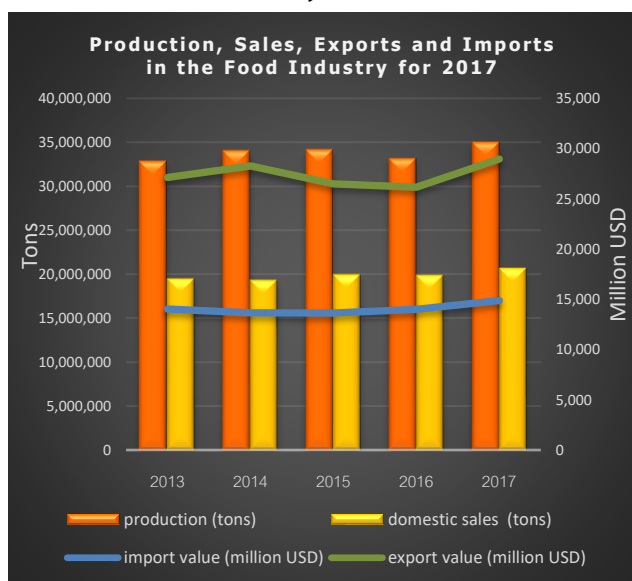
Relevant Government Policies

The Ministry of Commerce by the Gem and Jewelry Institute of Thailand (Public Organization) in collaboration with The Support Arts and Crafts International Center (Public Organization) issued the official quality standard for jewelry, through precious metal inspection with state-of-the-art tools and equipment to raise the standard of Thai jewelry, especially for jewelry made of silver and gold. The measure enhances the confidence both domestic and international consumers, and promotes Thai handicrafts.

Food Industry

In 2017, production in the food industry grew from 2016 to support increased output. The food industry was driven by export growth as demand continued to grow and with increased domestic consumption. The overall economic outlook continued to improve.

Production, Sales, Exports and Imports in the Food Industry for 2017



Source: Data for industry indexes, Office of Industrial Economics, Ministry of Commerce by grouping of the Office of Industrial Economics
Note * Primary Data

😊 **Food production** in 2017 reached a volume of 34,975,148.03 tons, a 5.61 percent growth from last year (%YoY) from production of key products such as crude palm oil, canned pineapple, chilled, frozen and processed chicken, raw sugar, frozen shrimp, instant noodles and animal feed to support continued increased domestic and international consumption.



😊 **Food sales** in 2017 reached a volume of 20,695,424.37 tons, a 3.99 percent growth from last year (%YoY) from the sale of livestock groups (chilled and frozen chicken), fish (frozen fish), vegetable oil (crude palm oil), fruits and vegetables (fruit juices and coconut milk), whole grains and flour (tapioca starch) and animal feed (chicken and pig feed), as the overall economic outlook continued to improve, consumption increased.



😊 **Exports in** 2017 reached a value of 28,959.94 million USD, a 10.72 percent growth from last year (%YoY) from increased exports in all key product groups. Products that grew in terms of volume and value were white rice, jasmine rice, flour, noodles, bread, instant noodles, chilled, froze and processed chicken, fresh, chilled, frozen and dried fruits (durian and longan) and food seasoning (sauce and seasoning powder). Products that dropped in export volume but increased in value were chilled and frozen shrimp, canned tuna and sugar from the growing economy of trade partners such as the U.S., EU, China, and CLMV.



😊 **Imports in** 2017 reached a value of 14,876.98 million USD, a 6.22 percent growth from last year (%YoY) from increased prices of chilled and frozen tuna and imports of vegetable oil, milk and dairy products to support growth of the animal feed, milk and other food industries with continued growth.



Food Industry Outlook for 2018

Overall production and export of foods in 2018 is expected to grow from last year, resulting from increased agricultural production from favourable climates and the recovering world economy, particularly in key trading partners such as the U.S., EU, China, Japan and CLMV. This is coupled with a projection for decreased production costs in line with low feedstock prices, resulting in continued growth of exports in livestock, fisheries, fruits and vegetables, sugar, rice, grains and cereals, in addition to improved domestic consumption from continued improvement of the overall economy.



Government Policies Relevant to the Food Industry

The super cluster policy “Food Innopolis” was implemented to encourage the development of full-cycle food processing innovation and the establishment of special economic zones along the border, including financial measures to support low income farmers, entrepreneurs, SMEs and community enterprises. As a result, the food and beverage is expected to grow.

Thai Industry Changes Under the concept of Thailand 4.0

The modern world is moving into a new dimension with leaping changes in all scopes, which will unavoidably impact the Thai economy. Thus, Thai industries must be transformed into a value-based economy and become an innovation-driven economy consistent with the “Thailand 4.0” concept to become a vital driving force for sustainable and balanced growth in all parts of the country. Focus must be on potential industrial development which covers both optimization of inputs in existing industries and development into new industries by changing and adding value to products and technology from existing industries.

The Ministry of Industry recognizes the importance and necessity of upgrading Thai industries to become an Industry 4.0 under the Thailand 4.0 concept, and has thus implemented the following key actions:

- **Establishment of measures / guidelines for the development of targeted industries and implement measures to take effect in practice.**

The Ministry of Industry by the Office of Industrial Economics (OIE) will present industry development measures/guidelines for the Cabinet’s approval to promote/push forward the measures that have been approved to be effective in the future. In the past, there were two measures approved by the Cabinet, which were:

1. Supporting measures for the production of cars powered by electricity in Thailand which was approved by the Cabinet on 28 March 2017 with the vision “Thailand as a quality automobile production base that is “clean, efficient and safe” with motor driven vehicles (xEV) and a quality test center to enhance Thai standards to international standards”. The target is set to produce xEV accounting for 25 percent of domestic car production by 2036.

2. Measures to develop robots and automation which the Cabinet approved on 29 August 2017, with the aim that in the next 1-2 years to stimulate the domestic robot market for 5 years to enhance robotics and automation technology with complex and increasing value. The 10-year goal is for Thailand to become a leader in ASEAN for production using robotics and automation, utilizing their own technology. It is expected that within 5 years after the measures have been implemented, industries will utilize robotics more, especially in labour-intensive industries, such as the food, logistics and the electrical and electronics industries. Such industries are expected to grow by at least 30 percent from present.

The drive of industrial development will be implemented through the Industrial Development Board's mechanism that will initiate the industrial development of the country. Board members comprise the Minister of Industry as a consultant, the Permanent Secretary of Industry as the chairperson, executives from different units within the Ministry of Industry, representatives from relevant ministries, President of the Federation of Thai Industries and President of the Thai Chamber of Commerce, with the OIE as Secretary. The first meeting was held in late December 2017. The meetings have considered (draft) measures for the development of Thailand's biotech industry in 2018-2027 and (draft) measures to develop the food processing industry in preparation for further approval of the Cabinet.

- **SME Development**

The Ministry of Industry by the Department of Industrial Promotion integrated with the Office of Small and Medium Enterprises Promotion, the Small and Medium Enterprise Development Bank of Thailand, specialized financial institutions and other relevant organization to set supporting measures and develop SMEs in 2018 under the "Special Measures to drive the SMEs to the 4.0", which the Cabinet approved in the meeting on 19 December 2017. The two parts are to promote development and financial measures, as well as budgetary frameworks for implementing projects.

Promotion measures integrated with the public, private, educational sector and other agencies. associated under the framework of major projects and initiatives such as upgrading the local economy, which includes the Creative Industry Village Plus project, the industrial project to create employment, opportunity and income to the community, the project to develop entrepreneurs in the agricultural processing industry, the Industry Transformation Center nationwide and enhancing the role of SME Support & Centers to connect all SME center as one. This is done through mechanisms and digital systems from the SME BIG DATA project to facilitate SME entrepreneurs to access information and services of SME support centers nationwide. The Train the Coach project aims to develop knowledgeable and talented coaches to drive SME entrepreneurs to solve business problems, the Big Brothers project to promote large industrial entrepreneurs to help SMEs, the Digital Value Chain project to promote SMEs to the global value chain through digital B2B platforms, the project to strengthen SMEs in financial knowledge so entrepreneurs understand and access the same accounting systems, the SME Standard Up project to enhance SMEs to appropriate standards by creating special standard systems (TIS.SME) in response to the market's demand.

In terms of financial measures, they support SMEs to access capital sources by improving access to capital, raising financial limits, adding target groups and restrictions, criteria or conditions so that SMEs can access capital sources according to their potential, to revitalize, expand business, to create jobs, careers and generate income for SMEs in a comprehensive and thorough way. The first capital group is focused on supporting small enterprises including the SME revitalizing and promotion project (small people) with an 8,000 million Baht limit, the Local Economy Loan project with a 50,000 million Baht limit and the Transformation Loan project for strengthening (soft loans to change machinery in phase 2) with a 20,000 million Baht limit. Furthermore, there are loan projects for SMEs by specialized financial institutions with loan project plans to support targeted SME groups that are comprehensive in terms of production, trade and service, allowing access to capital sources for use in the 2018 fiscal year, or continuing projects totaling a 165,000 million Baht limit.

- **Industrial Development in the Eastern Economic Corridor Area**

The Ministry of Industry gives great importance to spatial development under the concept that spatial development must link consistently and harmonically to the driving forces of industrial development in other aspects, whereby operations / projects must occur in appropriate areas and bring benefits to people in the area, and not only in big cities. The **development of the Eastern Economic Corridor (EEC)** covers development in 3 provinces namely, **Chachoengsao, Chonburi and Rayong** to develop an important strategic area and a production base of 10 targeted industries; targets are set according to investment plans for area development. It is estimated that the total investment from the public and private sectors will be around 1.5 trillion Baht in the first five years. This includes investment in a new city for 400 billion Baht, investment of 500 billion Baht in industry, in infrastructure such as U-Tapao Airport to support 3 million passengers/year, for development of Map Ta Phut and Laem Chabang ports and in high-speed and dual-track trains. In this regard, it will focus on upgrading national competitiveness, promote quality of life and sustainable development to propel national strategies according to the guidelines of Thailand 4.0.

In this regard, if the EEC area development progresses as planned, it will lead to cluster development within the Eastern Economic Corridor, whereby it is expected to contribute to a 5 percent economic growth per year, employing over 100,000 new jobs / year, cutting logistics costs by 400 billion Baht / year, attracting an additional 10 million tourists / year and gaining a new tax base of 100 billion Baht / year. In developing the EEC area, the government will push through the targeted projects according to the 5-year investment plan (2017-2021), such as:

1) **Development of infrastructure and transportation** including U-Tapao airport, Sattahip commercial port, Laem Chabang port, Map Ta Phut port, high-speed trains, new motorways and the Digital Infrastructure initiative.

2) **Target industry development** including intelligent vehicles, the aviation industry, robotics and automation, smart electronics, advanced petrochemicals and bio-economy, a comprehensive medical industry and becoming an innovation hub.

3) **Tourism development** using area landmarks for tourism development and taking advantage of transportation networks.

4) **Development of a global business hub** which will be free trade zone and urban development, comprehensive Infrastructure including electricity, water supply and high-speed internet.

In addition, the Ministry of Industry is in processes of driving the **draft Eastern Region Special Area Development Act B.E.....**to develop continuously and systematically in line with sustainable development principles which will ensure suitable use of land in the Eastern region. It will also enhance competitiveness of the country, especially in promoting commerce and industries that are technologically advanced, modern, innovative and environmentally friendly within the area. The cabinet's meeting on 19 September 2017 approved the draft of the act presented by the Ministry of Industry, which is currently in the process of review by the National Legislative Assembly before announcement for enactment in 2018.

- **Implementation of information technology systems to support industry development**

In 2018, the Ministry of Industry is going to implement more technological systems to facilitate to issue various types of certification in support of the Industry 4.0 and Thailand 4.0, in line with government policy. Measures which have been effective in January 2018 as follows:

- The Thai Industrial Standards Institute (TISI) will release industry product licensing (IPL) using the e-license system to reduce the processing time for issuance from 46 days to 10 working days. Furthermore, TISI will consider facilitating approvals for imports of standard products to businesses and people using the National Single Window (NSW) system which only requires 1 working day. Issuance of the Community Product Standards (CPS) certification will utilize the e-certificate system to reduce the processing time from 73 days to 33 working days, whereby a QR code will be on the certificate which will allow consumers to access accurate certification information, enhancing confidence in the product.

The Office of the Cane and Sugar Board (OCSB) will provide a database of registered sugarcane farmers and group leaders nationwide as a central database for monitoring the registration of sugarcane farmers and to the farmers, associations and sugar factories to access accurate information quickly. Users will be able to check information regarding the registration of sugarcane farmers, group leaders and past services.

The Department of Industrial Works (DIW) has the Factory Information Center System (FICs) project which will ensure information databases are accurate and consistent with factories' information, being a central information database for industrial factories nationwide.

The Industrial Estate Authority of Thailand (IEAT) has a project to permit and approve the import-export of products digitally using QR codes on import and export certificates to prevent fabricated documents, whereby businesses are permitted to print import-export certificates to use for customs processes. Initially, connections have been made with the customs database and piloted in 10 free trade zones in industrial estates including 1) Bangpoo Industrial Estate 2) Lat Krabang Industrial Estate 3) Ban Wa Industrial Estate 4) Northern Region Industrial Estate 5) Bang Pa-in Industrial Estate 6) Laem Chabang Industrial Estate 7) Gateway City Industrial Estate 8) Hemaraj Chon Buri Industrial Estate 9) TSD Industrial Estate and 10) Gemopolis Industrial Estate.

Furthermore, the Office of Industrial Economics has a project to improve big data systems to elevate the competitive index in industrial competition. The year 2018 will focus on infrastructural improvements to support big data initiatives. Expected outcomes are an industrial economic situation analysis model with gathered relevant industry economic data including both structured and unstructured data.