

Industrial Economic Status Report for 2020 and Outlook for 2021



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Executive Summary

Summary of the Thai Industrial Economy in 2020 and Outlook for 2021


The industrial economy status in 2020, when considered from the Manufacturing Production Index, is expected to contract by 8.0 percent, while in 2019, the MPI contracted by 3.6 percent. **Key industries that contracted in 2020 included the automobile industry** from a decline in the domestic and export markets due to the impact of the COVID-19 pandemic in many countries worldwide. As for domestic factors, production was temporarily suspended from April to May 2020, following measures to reduce the outbreak of the pandemic. **Petroleum refinery** contracted from the domestic consumption of fuel. Exports this year were affected by the coronavirus outbreak, causing economic activity to decline, especially the tourism sector. This resulted in a decrease in the travel of people both internationally and domestically. **Tires** contracted from the slowdown in domestic and international markets, corresponding to the contraction of the automobile industry. **Industries with good growth in 2020 included pharmaceuticals**, which grew from the previous year in line with the rising demand from the COVID-19 outbreak in domestic and international markets. The production of **packaged animal feed** increased from domestic and foreign demand due to the continued demand for meat during the COVID-19 outbreak.

Outlook for 2021


The Manufacturing Production Index (MPI) for 2021 is expected to grow in the range of 4.0 – 5.0 percent, from supporting factors: (1) Improved domestic demand. (2) Recovery of the economy and world trade volumes (3) Government-driven growth from budget disbursement and economic stimulus measures and (4) The growth of bases was unusually low in 2020. However, the expansion will be gradual due to the spread of the COVID-19 that continues to spread throughout the world and the wait for the definitive use of the vaccine in 2021.


 **Iron and Steel:** The production is forecasted to increase slightly at 0.0-1.0 percent compared to the same period of the previous year. Steel consumption in 2021 is expected to reach 17.5 million metric tonnes, increasing 5.0 percent, which is supported by the expansion of downstream industries such as the construction industry, especially government infrastructure construction projects. Furthermore, government policies and measures were launched to stimulate the economy and spending, promoting the domestic industry. The results of such measures are expected to increase production volumes and the domestic consumption of steel products. However, there are important issues to follow, such as the economic and global trade situation and measures to control over the of COVID-19 outbreak.


 **Electrical Appliances:** The production and exports will increase by 6.4 percent and 8.3 percent, respectively, compared to the previous year. Positive factors come from both inside and outside the country, such as the novel COVID-19 vaccine, the government's stimulus measures to increase demand for goods by the end of 2020, and disruption of production in the US and Europe. As a result, there is a continuous increase in orders for electrical appliances in Thailand in 2021.


 Electronics: It is expected that the production and exports of electronic products will increase by 4.7 and 5.0 percent, respectively, compared to the previous year. The growth comes as electronic products began to recover from the COVID-19 pandemic in 2020, together with the development of 5G technology systems, data centers, and products for IT infrastructure, resulting in increased domestic and international demand for electrical and electronic products. It is expected to enter the upwards cycle of the world electronics industry.


 Automobiles: It is expected that automobile production will reach approximately 1,800,000 units, increasing 28.57 percent from the same period last year. Approximately 40-50 percent of the production is expected to be sold domestically and 55-60 percent for export.

 Motorcycles: It estimates that production will be stable; the production volume is projected to reach approximately 2,000,000 units, whereby 85-90 percent of production will be for domestic sales and 10-15 percent for exports.

 Pulp, Paper and Print Media: The production is projected to continue to grow from 2020, except for printing and writing paper which will continue to decline as the popularity of print media declines. As for the pulp segment, exports are still in high demand from key importers such as China which continued to place purchase orders. Domestic consumption is expected to change with consumer behavioral changes after the COVID-19 outbreak, with the popularity of food delivery, online shopping, and ready-to-eat food businesses growing considerably. As a result, the opportunity for paper packaging and shipping to increase as well.


 Ceramics: The industry is expected to increase from domestic demand after the COVID-19 situation resolves, together with the government's economic stimulus packages. However, there are still important factors that may affect the growth, including the second wave of COVID-19 outbreaks, concerns about the domestic political situation, and the world economic situation. Overall, ceramic exports are expected to grow further from sanitary ware, tableware, souvenirs, jewelry, electrical insulators, and other ceramic products. Key export markets for ceramic products are still Japan, the US, China, and the CLMV countries


 Cement: The production is expected to increase slightly. due to the accelerated growth of the government's large-scale infrastructure for both existing and new projects. However, cement sales (excluding clinker) declined slightly as the real estate sector in 2020 had a lot of stock. In addition, there was uncertainty in the economic conditions due to the effects of the COVID-19, which had not been exhausted. It is expected to continue for at least the first half of 2021 or until the acquisition of vaccines is definite.


 Textile fibers and Wearing Apparel: It is expected that the production of textile fibers, fabrics, and apparel are expected to grow from 2020, in line with the recovering global economy, rising from domestic economic stimulus measures in the consumption and tourism sectors. In addition, there are economic stimulus measures in many countries, and the vaccine against the COVID-19 is expected to be available in 2021.

 Wood and Wooden Furniture: The production is expected to increase compared to last year to meet the needs of the market both domestically and internationally. Meanwhile, domestic sales of wooden furniture are expected to increase compared to the previous year. This is partly due to the domestic economic stimulus package and the opening for tourists and businessmen to enter the country. The export value of wood and wooden products is expected to increase compared to the previous year from the recovery of major export markets.

 Pharmaceuticals: It is expected that the industry will grow by 5.26 percent following the growing trend of the market, both domestically and internationally, especially especially Vietnam and Mynmar. following a good expansion of both domestic and international markets, whereby key markets that are expected to continuously increase from last year were markets in ASEAN region, especially Vietnam and Mynmar.

 Rubber and Rubber Products: The production of processed rubber in primary forms, automotive tires, and rubber gloves in 2021 is expected to grow by 9.81 percent, 4.98 percent, and 8.61 percent, respectively, due to the relatively low base of upstream processed rubber and automotive production in 2020. Meanwhile, the COVID-19 outbreak will result in domestic and international markets having a constant demand for medical gloves.

 Footwear and Leather Products: The production is expected to improve in all product groups, including the production of tanned leather and leather finishing, luggage, and shoes from domestic sales and exports, which began to recover due to the COVID-19 pandemic, which should be resolved. Furthermore, the government sector has measures to stimulate domestic spending and investment, including promoting tourism from foreigners by welcoming tourists under the Special Tourist Visa (STV).

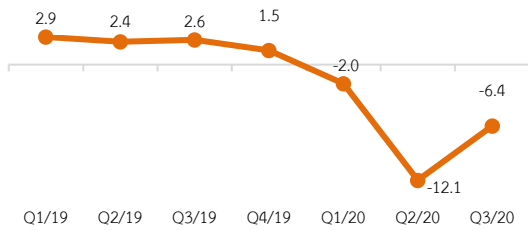
 Gems and Jewelry: The overall gem and jewelry production is expected to remain stable or increase slightly compared to the previous year. The growth comes from domestic sales and exports that are expected to recover due to the COVID-19 pandemic, which should be resolved. Furthermore, the government sector has measures to stimulate domestic spending and investment, including promoting tourism from foreigners with the Special Tourist Visa (STV) category. In addition, the 2020 database remained low.

 Food: The MPI of the overall food industry in 2021 is expected to increase by 2.3 percent from the same period of last year due to increased agricultural products such as cassava and pineapples, which increased the previous crop year. In addition, in 2021, there are signs for the delivery of the COVID-19 vaccines. As a result, the economy is expected to recover. Consumers will begin to have purchasing power leading to increased demand for basic food products and ready-made food, both in the domestic and foreign markets, including products such as chilled and frozen chicken meat, seasoned cooked chicken meat, frozen shrimp, canned fruits, tapioca starch, and instant pet food. However, the Office of the Cane and Sugar Board or OCSB estimates that sugar cane production in 2020 to 2021 will not exceed 70 million metric tons, a decrease of about 5 million metric tons from the previous year, resulting in the contraction of sugar production.

Part 1 Summary of the Thai Industrial Economy
in 2020 and Outlook for 2021

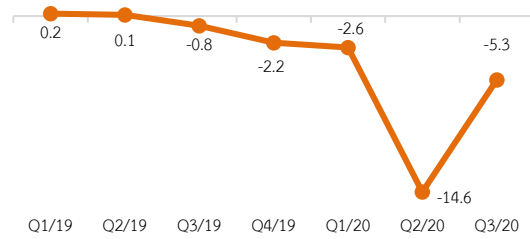
Thailand's Economic and Industrial Overview in 2020 and Outlook for 2021

GDP of the first three quarter decreased by 6.8 percent (%YoY)



Source: Office of the National Economic and Social Development Board

Industrial Sector's GDP of the first three quarter decreased by 7.5 percent (%YoY)

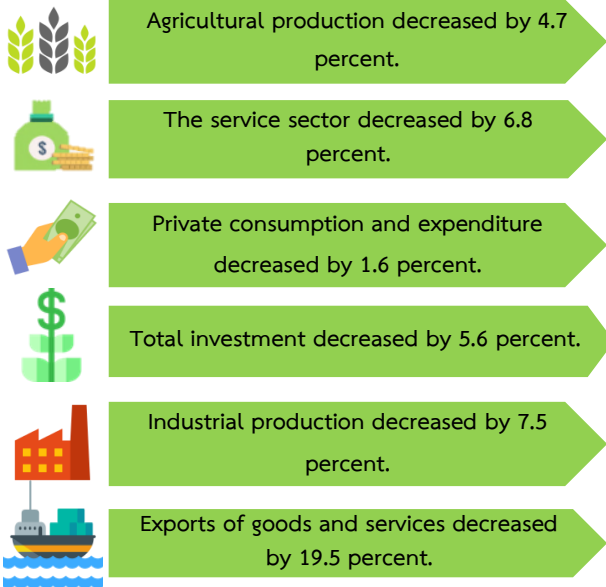


Source: Office of the National Economic and Social Development Board

Gross domestic product or GDP in the first three quarter of 2020 decreased by 6.8 percent from the first three quarter of 2020 which increased by 2.6 percent.

The industrial sector GDP of the first three quarters of 2020 contracted by 7.5 percent, increasing from the first two quarters, which contracted 8.6 percent, and a significant contraction from the same period last year, which contracted 0.2 percent, with a slowdown mainly in the automobile production category. However, supporting factors came from easing the enforcement of preventive measures to stop the spread of the COVID-19. Also, the government's economic stimulus measures resulted in the production of goods and services resuming in operation, and the export of goods also began to improve.

Key factors affecting the GDP during the first three quarters of 2020

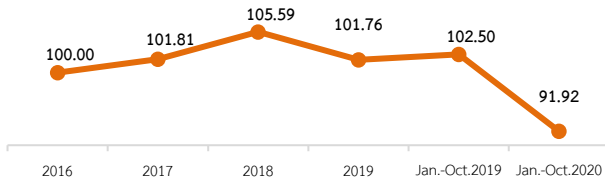


In the first three quarters of 2020, agricultural production, services sector, private consumption and expenditures, total investment, industrial production, and exports of goods and services decreased by 4.7, 6.8, 1.6, 5.6, 7.5, 19.5 percent, respectively.

Key Industrial Indices

Manufacturing Production Index in

Jan. – Oct. 2020 decreased by 10.33 percent
(%YoY)



Source: Office of Industrial Economics

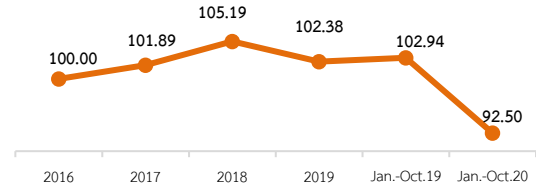
In the first 10 months (January - October) of 2020, the Manufacturing Production Index (MPI) was 91.92 points, a decrease of 10.33 percent from the same period last year (102.50 points).

Industries that contributed to the decrease of MPI in 2020 were the manufacture of automobiles, sugar, and refined petroleum products, etc.

The manufacturing production index in 2021 is expected to improve gradually but may not be as good as in 2019 due to the COVID-19 pandemic that continued to spread throughout the world and from awaiting clarity on using a vaccine against COVID-19.

Shipment Index in

Jan. – Oct. 2020 decreased by 10.14 percent
(%YoY)



Source: Office of Industrial Economics

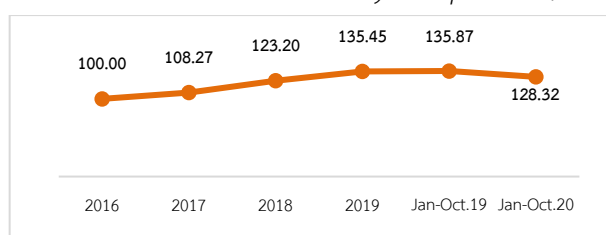
During the first 10 months (January - October) of 2020, the Shipment Index stood at 92.50 points, a decrease of 10.14 percent from the same period last year (102.94 points).

Industries that contributed to the decrease of the Shipment Index in 2020 were the manufacture of automobiles, sugar, and refined petroleum products.

The shipping index in 2021 is expected to align with the above Manufacturing Production Index (value-added).

Finished Goods Inventory Index

In Jan. – Oct. 2020 decreased by 5.56 percent (%YoY)



Source: Office of Industrial Economics

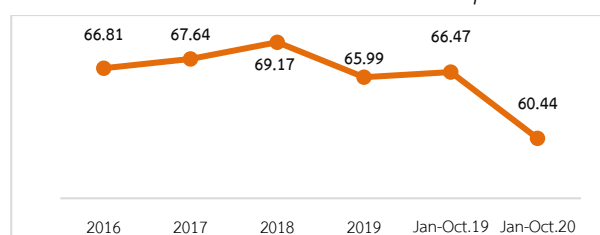
During the first 10 months (January - October) of 2020, the Finished Goods Inventory Index was 128.32 points, decreasing by 5.56 percent from the same period of 2019 (135.87 points).

Industries that contributed to the decline of the Finished Goods Inventory Index from the same period in 2019 were the manufacture of automobiles; distilling, rectifying and blending of spirits; the manufacture of sugar, etc.

Outlook for 2021, the Finished Goods Inventory Index is projected to decrease from 2020 in line with the industry circumstance that continuing recovery and an increase in demand for products; consequently, the inventories dropped.

Capacity Utilization Rate

In Jan. – Oct. 2020 stood at 60.44 percent



Source: Office of Industrial Economics

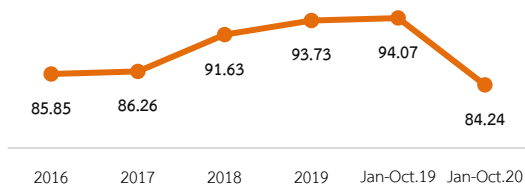
During the first 10 months (January - October) of 2020, the Capacity Utilization Rate was 60.44 percent, decreasing from the same period of 2019 (66.47 percent).

Industries that contributed to the decrease of the Capacity Utilization Rate from the same period in 2019 were the manufacture of automobiles, sugar, and motorcycles, etc.

The capacity utilization rate in 2021 is expected to improve gradually as the government relaxes measures to prevent and stop the spread of COVID-19, enabling production and service activities to resume.

Industrial Sentiment Index

in January – October was at 84.24.



Source: The Federation of Thai Industries

During January – October 2020 (the first ten months), the Averaged Industrial Sentiment Index was 84.24 points, decreasing from the same period of 2020 (94.07 points). Three-month forecast of Sentiment Index stood at 93.66 points, decreasing from the same period of 2019 (103.13 points).

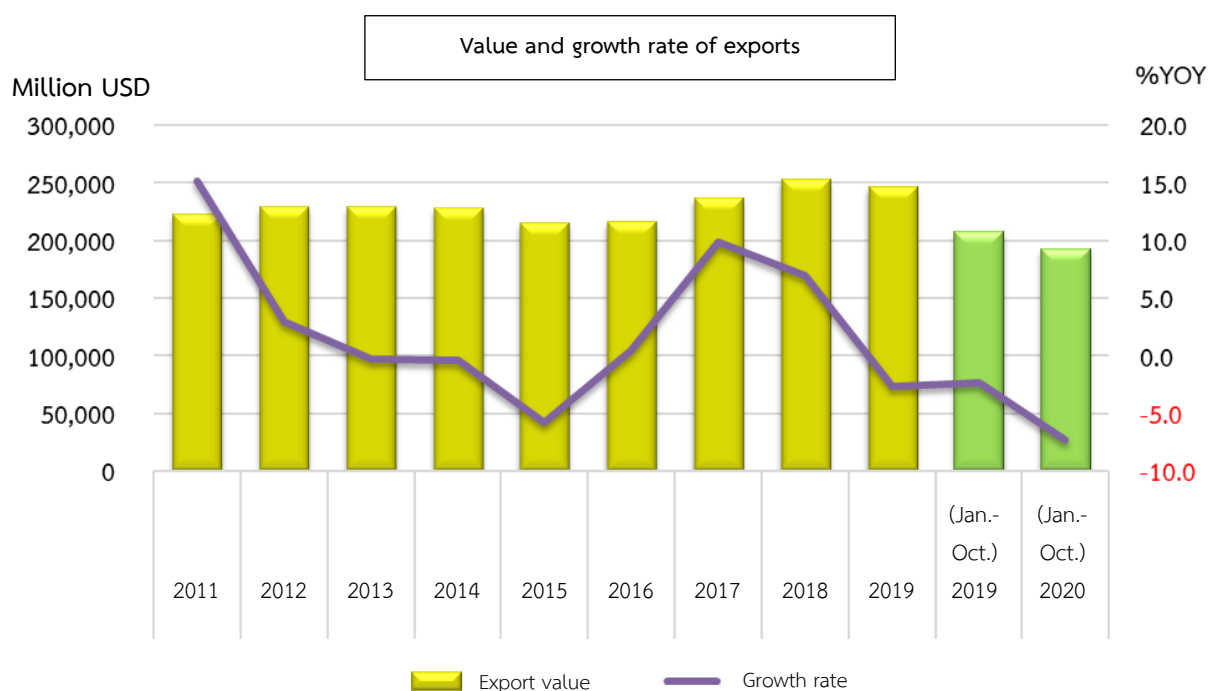
The industrial confidence index in 2021 is expected to remain stable from 2020 due to concerns over the uncertainty of the COVID-19 pandemic. There was a second wave of outbreaks in many countries, especially Europe, and the second round of lockdowns slowing down economic activity. Orders from overseas fell. As a result, entrepreneurs faced a lack of liquidity in businesses, especially SMEs.

Foreign Trade

"The value of foreign trade in 2020 (Jan-Oct) contracted from 2019 (Jan-Oct). Thailand's international trade decelerated in line with international demand. However, Thailand's main export markets signaled a good recovery from Thai exports to the US and China with an increasing growth rate. Furthermore, less of other trading partners trended to contract, reflecting that the world economy has a strong, gradual recovery trend."

Thailand's foreign trade in 2020 (Jan. – Oct.) reached a total value of 362,075.4 million USD. The export value decreased by 7.3 percent compared to last year to a total value of 192,372.8 million USD. Import value dropped 14.6 percent compare to last year to a total value of 169,702.6 million USD. However, trade balance still in a surplus of 22,670.29 million USD in 2020 (Jan. – Oct.).

Export Structure

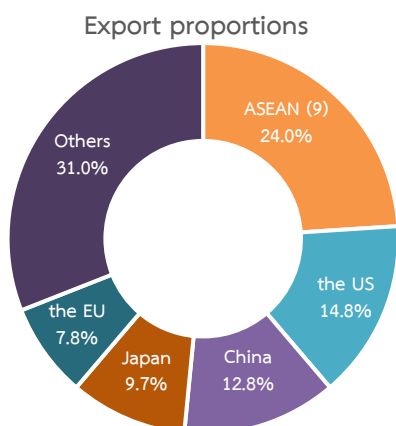


Source: Ministry of Commerce

Thailand's exports in 2020 (Jan. – Oct.) decreased by 7.3 percent compared to the same period last year to 192,372.8 million USD. All key products decreased in export value as follows: agricultural products reached 17,425.1 million USD, a decrease of 5.4 percent; agro-industrial products dropped by 3.1 percent to 15,180.7 million USD; industrial products dropped by 7.0 percent to 154,300.7 million USD; mineral ore and fuel products dropped by 26.7 percent to 5,466.21 million USD.

Industrial products with a contraction in exports were automobiles, accessories, and parts (with the export value of 16,812.6 million USD, a decrease of 28.1%), plastic pellet (with the export value of 6,514.6 million USD, a decrease of 15.9%), circuit boards (with the export value of 5,847.8 million, a decrease of 6.8%). However, some products remained increasing, such as gems and jewelry (with the export value of 16,899.9 million USD, increasing 20.9%); computer, accessories, and parts (with the export value of 15,342.9 million USD, increasing 2.1%), rubber products (with the export value of 9,810.8 million USD, increasing 6.4%).

Export Markets

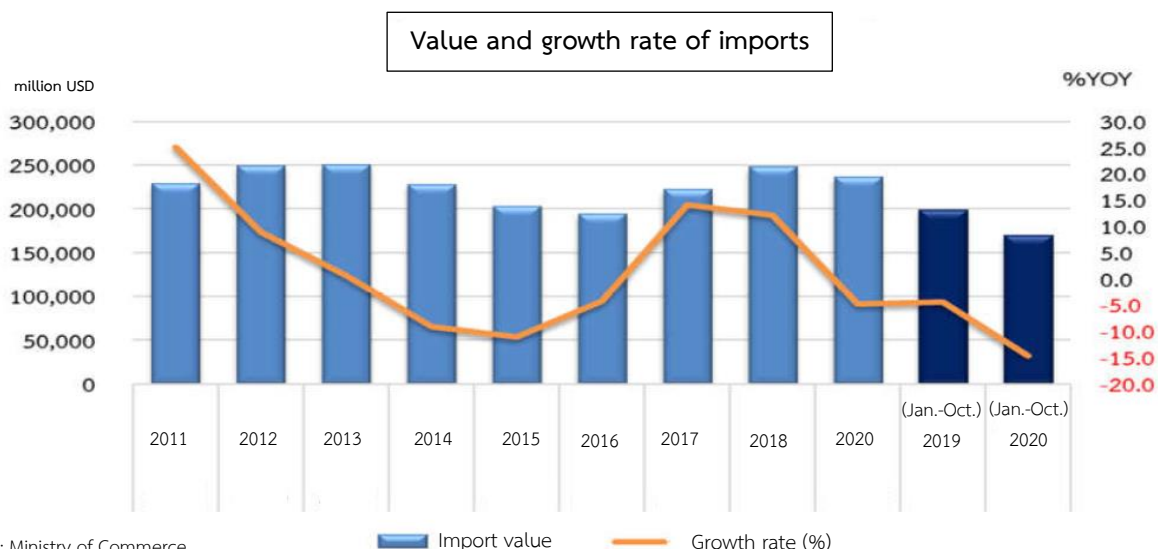


Source: Ministry of Commerce

Compared to the same period last year, in 2020 (Jan.-Oct.) exports to the US and China increased; meanwhile exports to other key trading partners dropped. The proportion of exports to 5-major markets, namely ASEAN (9 countries), the US, China, Japan, and the EU (excluding the UK) accounted for 69.0 percent of total exports; exports to other markets accounted for 31.0 percent of the total exports. Details are as follows:

- Thailand exported products to ASEAN (9 countries), the US, China, Japan, and the EU (excluding the UK), which accounted for 24.0 percent, 14.8 percent, 12.8 percent, 9.7 percent, and 7.8 percent, respectively.
- The export growth rate, compared with the same period last year, expanded in the US and China by 8.2 percent and 1.2 percent, respectively. Meanwhile, exports to ASEAN (9 countries), the EU (excluding the UK), and Japan contracted by 12.4 percent, 10.1 percent, and 7.9 percent, respectively.

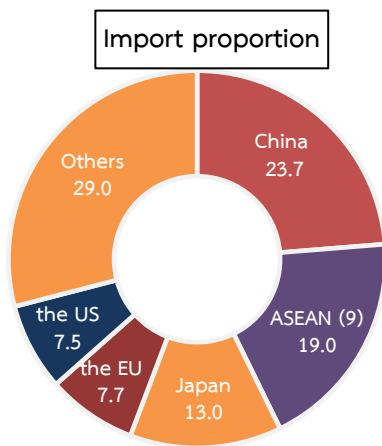
Import Structure



Source: Ministry of Commerce

Import value in 2020 (Jan. – Oct.) dropped by 14.6 percent compared to the same period last year to 169,702.6 million USD, whereby imports of most key products decreased. When categorized the product groups, imports of fuel products fell 21.7 percent to 24,208.2 million USD. Capital goods fell 11.7 percent to 45,274.4 million USD. Raw materials and semi-finished products fell 13.3 percent to 67,870 million USD. Consumer goods fell 9.7 percent to 21,014.24 million USD. Vehicles and transport equipment fell 26.0 percent to 9,294.9 million USD. Weaponry, military supplies and other products fell 17.5 percent to 2,040.7 million USD.

Source of Imports



Source: Ministry of Commerce

In 2020 (Jan.-Oct.), Thailand's key import markets were China, ASEAN (9 countries), Japan, the EU, (excluding the UK), and the US. Imports from these countries accounted for 71.0 percent of overall imports; and imports from other markets accounted for 29.0 percent. Details are as follows:

- Thailand imported products from China, ASEAN (9 countries), Japan, the US, and the EU (excluding the UK), which accounted for 23.7 percent, 19.0 percent, 13.0 percent, 7.7 percent, 9.7 percent, and 7.5 percent, respectively.
- The import growth rate, compared with the same period last year, from Japan, the EU (excluding the UK), ASEAN (9 countries), the US, and China contracted by 20.9 percent, 17.4 percent, 14.8 percent, 10.8 percent, and 2.3 percent, respectively.

Export Trends

Exports in 2020 (Jan-Oct), when compared to the same period of 2019 (Jan-Oct), shrank due to the COVID-19 pandemic, affecting the global economy, especially at the beginning of the year. But in the middle of the year, many countries began to control the pandemic, gradually easing measures for city shutdowns. In addition, the government sector in each country issued more measures to mitigate the economic impact and promote business operations domestically. As a result, the economy started to recover. This was a factor that encouraged a gradual rise in international consumer demand.

Overall, the volume of Thai international trade is likely to shrink less and has an opportunity to expand, under the assumption that Thailand becomes free from the new coronavirus outbreak and its major trading partners can control the pandemic rate. Thailand continues to face the pressure of global economic uncertainty, concerns over the return of the novel coronavirus, the US economic and trade policy action under the leadership of the new President, including the Baht's appreciation, which may affect the direction of Thailand's international trade.

The World Economy in 2020

“Overall, economic conditions, export and imports, and production contracted. Inflation and policy interest rates remained low, while the unemployment rate remained high.”

Summary of Key Countries’ Economic Indicators in 2020

	Growth (%YoY)						
	GDP 2020 ^F	Inflation 2020 ^F	MPI 2020 ^F	Export (JAN-OCT)	Import (JAN-OCT)	Unemp. Rate ^F	Policy Rate ^F
the US	↓ 4.3	↑ 2.1	↓ 3.9	↓ 14.7	↓ 9.3	At 8.9	At 0.00-0.25
China	↑ 1.9	↑ 1.4	↑ 7.5	↑ 0.1	↓ 5.4	At 3.8	At 4.35
Japan	↓ 5.3	↓ 0.6	↓ 9.0	↓ 11.7	↓ 13.3	At 3.3	At -0.10
South Korea	↓ 1.9	↑ 0.4	↓ 2.2	↓ 8.2	↓ 9.3	At 4.1	At 0.50
Singapore	↓ 6.0	↓ 0.5	↓ 0.9	↓ 4.6	↓ 10.2	At 3.0	At 0.70

Source: Gathered from www.ceicdata.com, www.imf.org, www.oie.go.th, www.nesdc.go.th, www.opec.org

Note: F are the forecasted figures from IMF.

In 2020, the IMF forecasts a global economic contraction of 4.4 percent, as the coronavirus outbreak in the first and second quarter of 2020 stretched and spread widely. The outbreak pressured the economy, trade, and production in many countries, causing more contraction than expected, while the unemployment rate rose.

At the end of 2020, the Federal Reserve Bank maintained the policy rate level at 0.00-0.25% to support domestic business and employment recovery. This is in line with Thailand’s main trading partners, which maintained the same policy interest rate to help stimulate the expansion of the business sector. The Office of the National Economic and Social Development Board forecasts that the Thai economy in 2020 will contract by 6.0 percent.

Crude oil prices were lower than the same period last year. Dubai crude oil prices in October 2020 stood at 40.70 USD/barrel, a contraction compared to October 2019. In 2020 (Jan-Oct), the prices averaged 42.22 USD/barrel, a contraction compared to 2019 (Jan-Oct), which averaged 63.52 USD/barrel. The NYMEX crude oil prices in October 2020 were 39.53 USD/barrel. Crude oil prices fell in line with the global economic slowdown. As a result, the demand for crude oil remained low. In addition, crude oil production capacity within OPEC and OPEC Plus groups remained high, resulting in crude oil prices remaining stable at a low level and unable to rise much.

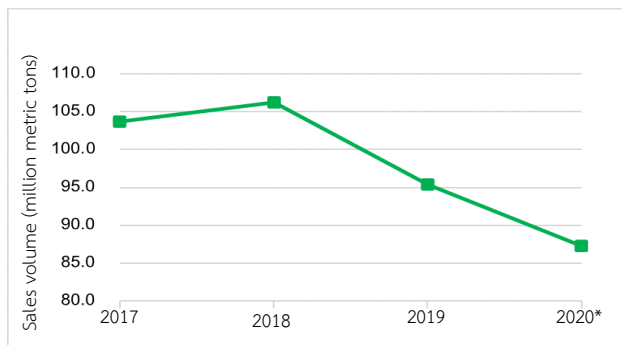
The world economy still has issues to be monitored, such as the COVID-19 pandemic, as many countries faced a second wave of outbreaks. In addition are the trade protection measures between the US and China by the new President of the US that could affect the global trade climate and geopolitical disputes in many countries. However, suppose the development of a vaccine against COVID-19 can be produced widely; inevitably, the government sector will loosen measures to control the pandemic, promoting more opportunities for economic activity. This is a factor driving trade, investment, and production volumes to recover.

Part 2: Sectoral Industrial Economic Conditions of Thailand in 2020 and Outlook for 2021

Iron and Steel Industry

The MPI of the iron and steel manufacturing industry in 2020* fell compared to 2019, decreasing in both long-formed and flat-formed steel products. Long-formed steel products that contracted included steel bars, wire rods, and hot-rolled structural steel. Flat-formed steel products that contracted included cold-rolled steel sheets and galvanized steel sheets.

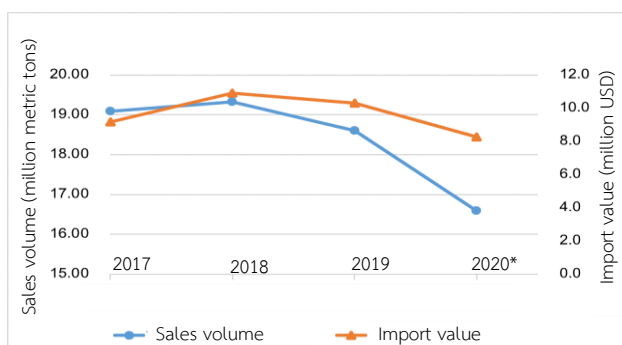
Manufacturing Production Index (MPI)



Source: Office of Industrial Economics

* estimation in 2020 by the Office of Industrial Economics

Sales volume - Import value



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

* estimation in 2020 by the Office of Industrial Economics and Iron and Steel Institute of Thailand

The MPI in 2020* is expected to decline compared to the previous year. The MPI was 87.3, down 8.5 percent (%YoY), decreasing in both long and flat products. Long products that contracted included steel bars, wire rods, and hot-rolled structural steel due to the slowdown in downstream industries such as the construction industry. The construction of private housing was affected by the slowdown of the economy, resulting in reduced housing construction. Flat products that contracted included galvanized sheets, as the producers in downstream industries imported cheaper products from foreign countries such as China and Vietnam. However, the production of tin-plated and chromium-plated steel sheets in 2020 increased from the production of downstream industries such as the metal can packaging industry.

Domestic sales in 2020* are expected to reach 16.6 million metric tons, a decrease of 10.6 percent (%YoY) for both long and flat products. Long products that decreased in sales included wire rods, rebars, and hot-rolled structural steel sections; flat products that decreased in sales included hot-rolled sheets and cold-rolled sheets.

Imports in 2020* are expected to value 8.3 billion USD, down 20.0 percent (%YoY), down across both long-formed and flat-formed steel products. Long-formed steel products that decreased in import value included rebar used in downstream industries such as the automotive industry, white steel shaft, and seamless steel pipes. Flat-formed steel products with a lower import value included cold-rolled steel sheets, thick hot-rolled steel sheets, and EG galvanized steel sheets.

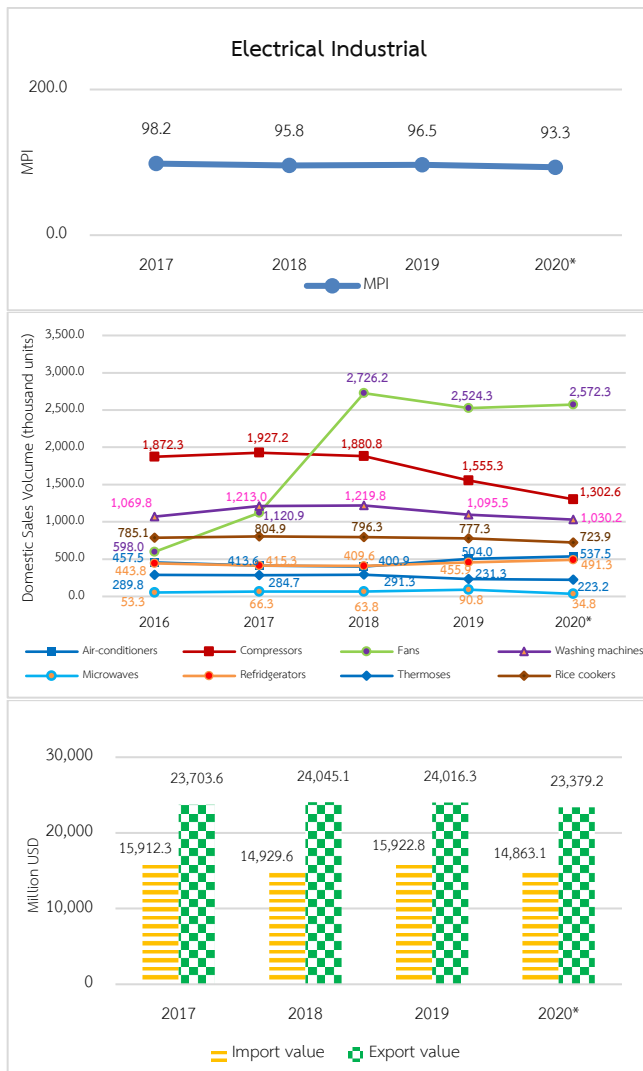
2021 Outlook for Iron and Steel Industry

Production in the steel industry in 2021 is expected to increase slightly at 0.0-1.0 percent compared to the same period of the previous year. Steel consumption in 2021 is expected to reach 17.5 million tonnes, an increase of 5.0 percent, supported by the expansion of downstream industries such as the construction industry, especially government infrastructure construction projects. Furthermore, government policies and measures were launched to stimulate the economy and spending, promoting the domestic industry. The results of such measures are expected to increase production volumes and the domestic consumption of steel products. There are important issues to follow, such as the economic and global trade situation and control over the spread of COVID-19.

Electrical Appliance Industry

Production of electrical appliances in 2020* compared to 2019 contracted by 3.3 percent from compressors, fans, air-conditioners, washing machines, rice cookers, and microwave ovens which dropped due to the COVID-19 outbreak. As a result, the world economy slowed down, causing trade partners to slow down orders.

MPI, Import and Export Value of Electrical Appliances



Source: Production information—Office of Industrial Economics
Import/export information—Electrical and Electronics Institute

Imports of electrical appliances in 2020* valued at 14,863.1 million USD, a contraction of 6.7 percent compared to last year (% YoY) due to key markets, including ASEAN, the EU, the US, and Japan reduced imports of dry-cleaning machines and components, power generators, and circuit breakers.

Production of electrical appliances in 2020* was stable compared to the previous year. The MPI was 93.3 points, a contraction of 3.3 percent (%YoY). Electrical appliances that decreased included compressors (-14.7%), fans (-12.3%), air-conditioners (-8.4%), rice cookers (-5.6%), microwave ovens (-1.2%), and washing machines (-0.3%). Orders from overseas for air conditioners declined, especially from China, Japan, ASEAN, and the EU. The production of fans declined due to a drop in orders from Japan, the EU, and ASEAN markets. Meanwhile, products that increased included transformers (12.0%), cables (11.0%), refrigerators (8.9%), and thermoses (8.1%) due to increased domestic sales and overseas orders, especially refrigerators and transformers exported to ASEAN, the US, China, and Japan.

Domestic sales: In 2020*, products that sold domestically decreased from last year, namely microwave oven (-60.3%), compressors (-16.2%), electric motors (-8.5%), rice cookers (-6.8%), washing machines (-5.8%), and thermoses (-3.5%). Meanwhile, products that increased in sales were cable (20.9%), refrigerators (7.8%), air-conditioners (6.7%), fan (1.8%), and electric cables (0.7%).

Exports of electrical appliances in 2020* decreased 2.7 percent (%YoY) to 23,379.2 million USD from the decline of compressors, dry cleaning machines, and air-conditioners exported to ASEAN, the EU, and Japan market. Meanwhile, microwave ovens and refrigerators increased in export value from exports to the China and the US markets.

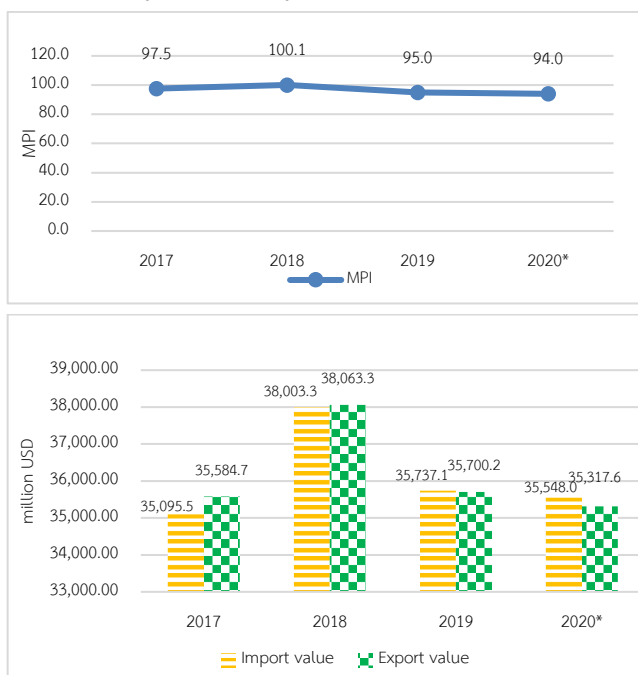
2021 Outlook for Electrical Appliance Industry

The electrical appliances industry in 2021 is expected to increase in the production and exports by 6.4 percent and 8.3 percent, respectively, compared to the previous year. Positive factors come from both inside and outside the country, such as the novel COVID-19 vaccine, the government's stimulus measures to increase demand for goods by the end of 2020, and disruption of production in the US and Europe. As a result, there is a continuous increase in orders for electrical appliances in Thailand in 2021.

Electronics Industry

The production of electronic products in 2020* decreased slightly by 1.1 percent compared to 2019, which decreased in PCBAs, printers, HDDs, and ICs. This was due to the global contraction for electronic products, resulting in a decrease in export value in key markets, namely Japan, ASEAN, China, the EU, and the US.

MPI, Import and Export Value of Electronics



Source: Production information—Office of Industrial Economics
Import/export information—Electrical and Electronics Institute

Production of electronics in 2020* decreased by 1.1 percent (%YoY) compared to last year, reaching an MPI of 94.0 points. Electronic products that decreased included PCBAs, printers, HDDs, and ICs, by 6.2 percent, 2.9 percent, 1.6 percent, and 0.2 percent, respectively, compared to the previous year. The decline in production was from a slowdown in global demand for electronic products, including technology that is developing rapidly.

Imports of electronics in 2020* decreased by 0.5 percent from the previous year (% YoY) to 35,548.0 million USD, as key markets such as the EU, Japan, ASEAN, and the US reduced the imports of computer components parts and accessories.

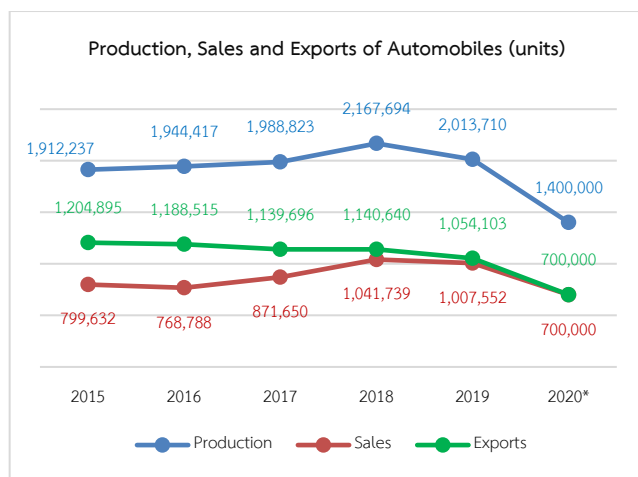
Exports of electronics in 2020* valued 35,317.6 million USD, a decline by 1.1 percent (%YoY) contracting in the EU, Japan, and ASEAN markets. Integrated circuits (IC) declined by 7.9 percent and computer components and equipment by 2.0 percent due to economic slowdown. In addition, electronic products are products that use medium-high technology, which changes relatively quickly. Furthermore, the spread of the COVID-19 impacted the global supply chain, causing the production base to relocate and businesses to shut down. Industrial product exports contracted due to the US-China trade protection policy through the supply chain. As a result, the export of electronic products contracted.

2021 Outlook for Electronics Industry

The electronics industry in 2021 is expected to increase by 4.7 and 5.0 percent in production and exports of electronic products, respectively, compared to the previous year. The growth comes as electronic products began to recover from the COVID-19 pandemic in 2020, together with the development of 5G technology systems, data centers, and products for IT infrastructure, resulting in increased domestic and international demand for electrical and electronic products. It is expected to enter the upwards cycle of the world electronics industry.

Automobile and Parts Industry

The automobile industry in 2020 is expected to decelerate in volume compared to the same period of the previous year. This was a decline in the domestic and export markets due to the impact of the COVID-19 pandemic in many countries around the world. As for domestic factors, production temporarily halted (April - May 2020) in line with measures to reduce the spread of the pandemic, together with droughts and the slowdown in the domestic economy.



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

Production of Automobile

In 2020, production of automobiles is expected to reach 1,400,000 units, a decrease of 30.48 percent (%YoY) from last year (2,013,710 units). This consisted of 42 percent passenger cars, 56 percent for 1-ton pickup trucks and derivatives, and 2 percent for other commercial vehicles.

Domestic Sales of Automobile

In 2020, domestic automobile sales are expected to reach 700,000 units, a decrease of 30.53 percent growth from last year (1,007,552 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.

Exports of Automobile

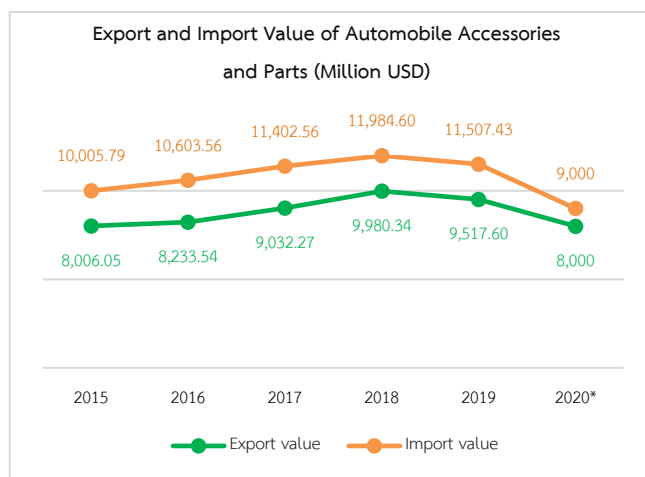
In 2020, exports of automobile (CBU) are expected to reach 700,000 unit, a decrease of 33.59 percent from last year (1,054,103 units).

Export Value of Automobile Accessories and Parts

The export Value of automotive accessories and parts in 2020 is expected to be 8,000 million USD, a decrease of 15.95 percent from the same period last year (9,517.60 million USD). Key export markets of automotive accessories and parts were Japan, Indonesia, and Malaysia.

Import Value of Automobile Accessories and Parts

The import of automotive accessories and parts in 2020 is expected to be 9,000 million USD, down 21.79 percent from the same period last year (11,507.43 million USD). Key import markets of automotive accessories and parts were Japan, China, and the US.



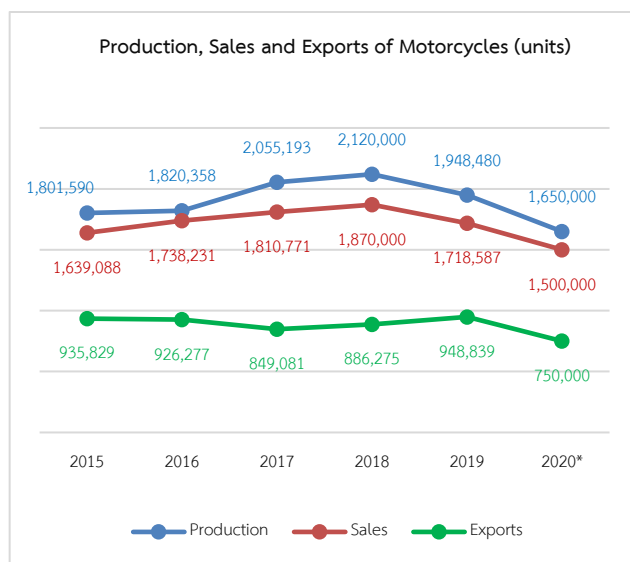
Source: Information and Communication Technology Center, Office of the Permanent Secretary of Commerce in collaboration with Customs Department
* Forecasted by the Office of Industrial Economics

2021 Outlook for Automobile Industry

The Office of Industrial Economics expects that automobile production will reach approximately 1,800,000 units, increasing 28.57 percent from the same period last year. Approximately 40-50 percent of the production is expected to be sold domestically and 55-60 percent for export.

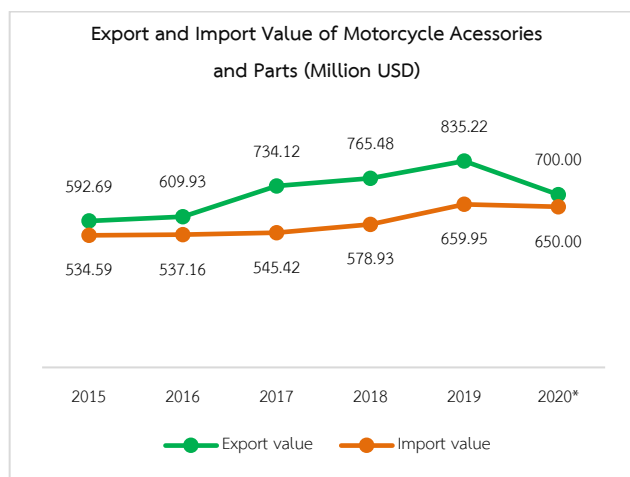
Motorcycle and Parts Industry

The motorcycle industry in 2020 is expected to slow down compared to the same period last year. The slowdown was due to a decrease in demand from domestic and export markets as a result of the impact of the COVID-19 outbreak in many countries around the world.



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

* Forecasted by the Automotive Industry Club, The Federation of Thai Industries



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

* Forecasted by the Automotive Industry Club, The Federation of Thai Industries

Motorcycle Production

In 2020, production of motorcycles is expected to reach 1,650,000 units, a decrease of 15.32 percent from the same period last year (1,948,480 units).

Domestic Motorcycle Sales

In 2020, Thailand's domestic motorcycle sales are expected to reach 1,500,000 units, a decrease of 12.72 percent from the same period last year (1,870,000 units).

Motorcycle Exports (CBU & CKD)

In 2020, the export volume of motorcycles (CBU & CKD) of Thailand are expected to reach 750,000 units (exported as CBU—350,000 units and exported as CKD—400,000 sets), decreasing 20.96 percent compared to the same period last year (948,839 units).

Export Value of Motorcycle Parts

In 2020, motorcycle parts' export value is expected to decrease by 16.19 percent to a value of 700 million USD compared to the same period last year (835.22 million USD), whereby key export markets for motorcycle parts were Cambodia, Indonesia, and Japan.

Import Value of Motorcycle and Bicycle Accessories and Parts

In 2020, import value is expected to decrease by 1.51 percent to 650 million USD compared to the same period last year (659.95 million USD). Key import markets for motorcycle and bicycle parts and accessories were Japan, China, and Vietnam.

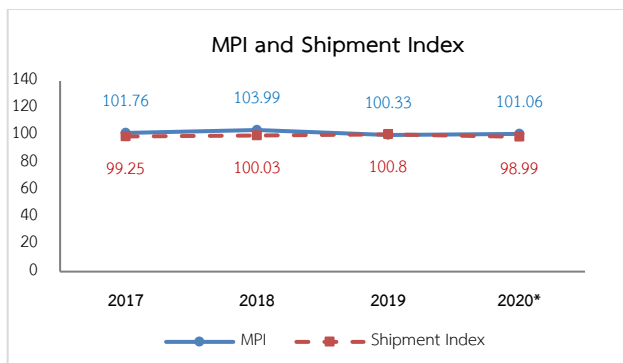
2021 Outlook for Motorcycle Industry

The Office of Industrial Economics estimates that production will be stable; the production volume is projected to reach approximately 2,000,000 units, whereby 85-90 percent of production will be for domestic sales and 10-15 percent for exports.

Chemical Industry

The overall chemical industry in 2020 is expected to grow by 0.73 percent compared to 2019. Exports are expected to contract by 6.60 percent due to the impact of the COVID-19 outbreak, resulting in the global economic slowdown, causing product demand to decrease. Imports are expected to contract 7.53 percent.

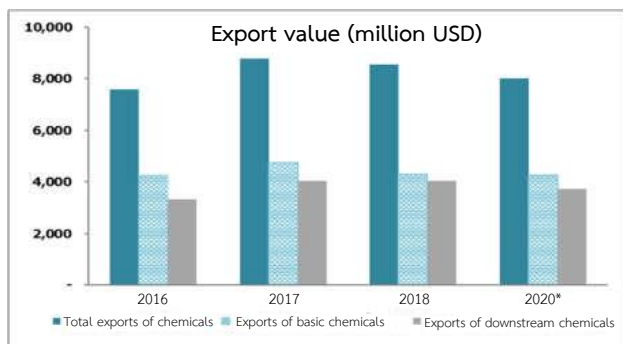
Production and sales



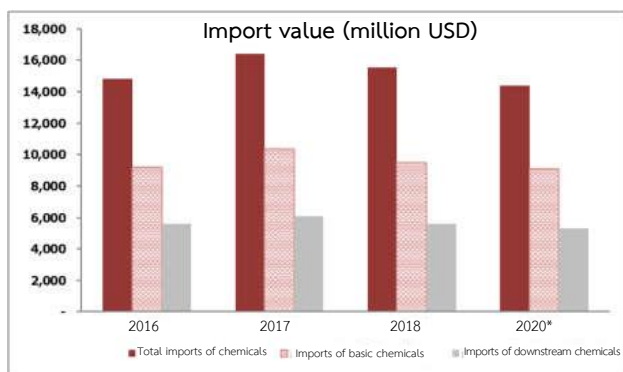
Source: The Office of Industrial Economics * Forecasted figures in year 2020

The MPI in 2020 is expected to reach an index of 101.06 or grow by 0.73 percent compared to 2019. Products that cause the MPI to grow include chemical fertilizers (21.21%), shampoo (8.26%), and detergent (2.50%).

The shipment index in 2020 is expected to reach 98.99, or contract by 1.80 percent compared to 2019. The product that highly contributes to the decrease in the shipment index is industrial paints (-15.23%). Due to the COVID-19 outbreak which affects downstream industries such as the automotive industry, production slowed down, causing the demand to decrease.



Exports of chemical products in 2020 are estimated to reach a value of 7,997.82 million USD, contracting by 6.60 percent compared to 2019. Products that contract in export values include cosmetics (-22.03%), organic chemicals (-12.33%), and inorganic chemicals (-9.65%).



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs
* Estimated figures in 2020

Imports of chemical products in 2020 are expected to reach 14,375.37 million USD, contracting by 7.53 percent compared to 2019. Products with the highest decrease in import value is cosmetics (-26.65%).

2021 Outlook for Chemical Industry

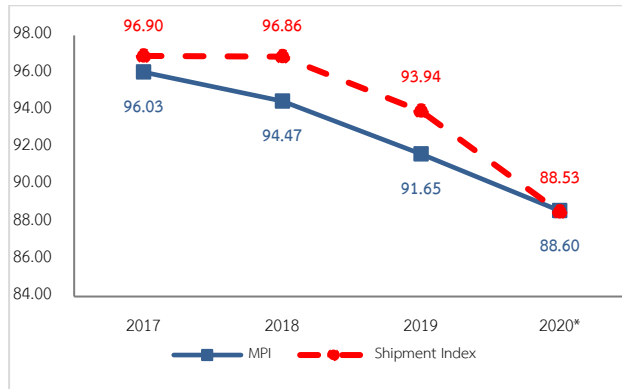
The MPI and exports for the chemicals industry in 2021 are expected to grow by 2-3 percent compared to 2020. Factors affecting the growth include controlling the spread of the COVID-19, the recovery of the world economy, and the government's economic stimulus measures.

Plastics Industry

The overall plastic industry in 2020 is expected to contract in MPI by 3.32 percent compared to 2019. Exports are expected to contract by 4.71 percent and imports to contract by 4.68 percent due to the impact of the COVID-19 outbreak, resulting in the global economic slowdown.

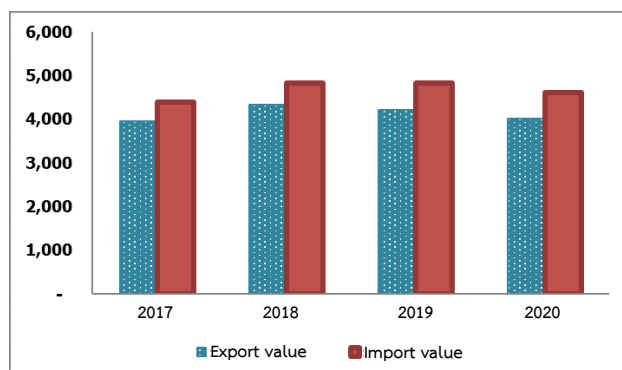
Production and sales

MPI and Shipment Index



Source: Office of Industrial Economics; * Estimated figures in 2020

Export/Import Value (million USD)



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Commerce in collaboration with Thai Customs
* Estimated figures in 2020

The MPI in 2020 is expected to contract by 3.32 percent compared to 2019. Products that are expected to cause the production index to contract include tableware, kitchenware, and toilet articles (-21.04%), plastic films (-17.46%), and other plastic containers (-11.07%).

The shipment index in 2020 is expected to decrease by 5.77 percent compared to 2019, decreasing in almost products except plastic bags. Product that highly contributed to a decrease in the shipment index are plastic tableware, kitchenware, and toilet articles (-30.22 percent).

Exports of plastic products in 2020 is expected to drop 4.71 percent compared to 2019 to 4,008.22 million USD. Products that decrease in export value are household articles (HS 3924) (-20.76%), tubes and hoses (HS 3917) (-13.58%), and builders' ware of plastics (HS 3925) (-13.28%).

Imports of plastic products in 2020 is expected to decrease by 4.68 percent compared to last year to 4,597.64 million USD. Products that decrease in import value are sanitary ware (HS 3922) (-19.66%), monofilament (HS 3916) (-17.48%), and household articles (HS 3924) (-10.08%).

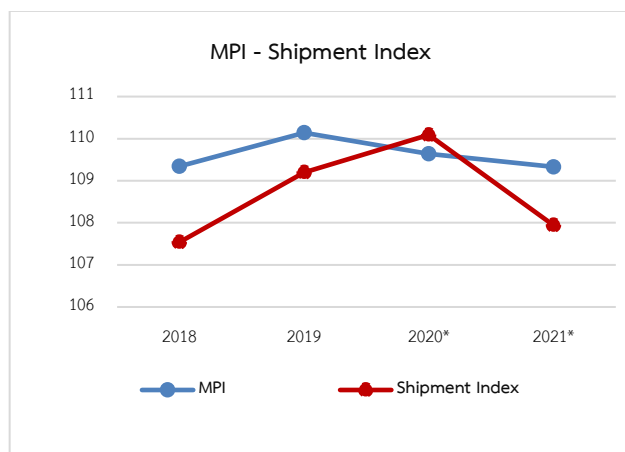
2021 Outlook for Plastics Industry

The MPI of the plastics industry in 2021 is expected to grow by 2-3 percent. Exports of plastic products are expected to grow by 3-4 percent compared to 2020. Factors that will affect the growth of the plastics industry include the control over the spread of the COVID-19, the recovery of the world economy, US trade policy measures, and the government's economic stimulus measures.

Petrochemical Industry

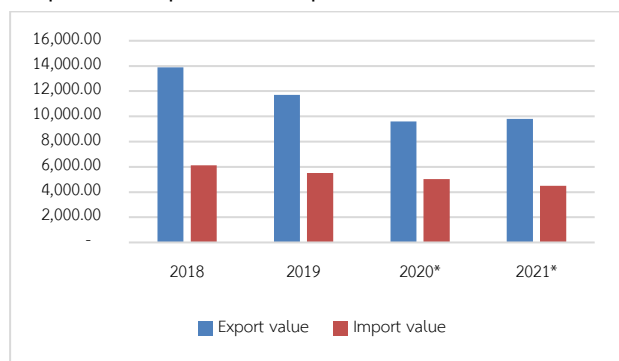
The overall petrochemical industry in 2020 is expected to contract by 0.45 percent compared to 2019. Exports and imports are expected to contract by 18.03 percent and 8.62 percent, respectively, as global economy slowed down from the COVID-19 outbreak and the Baht's appreciation.

Production and sales



Source: Office of Industrial Economics, * Estimated figures in 2020 and 2021

Import and export value of petrochemicals (million USD)



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

* Estimated figures in 2020 and 2021

2021 Outlook for Petrochemical Industry

The MPI of the petrochemical industry in 2021 is expected to contract by 3-5 percent. However, exports of petrochemical products are expected to expand by 1.9-2.5 percent compared to 2020. The petrochemical industry in 2021 is expected to grow slightly from the government's investment promotion policy. Nevertheless, there are still factors that will affect the growth of the petrochemical industry, such as the slowdown of the global economy, oil prices, the appreciation of the Baht, and the US deprivation of Thailand's GSP rights.

The MPI in 2020 is expected to decrease by 0.45 percent compared to 2019. Upstream and downstream petrochemical products that contribute to a decrease of MPI are Ethylene (-4.42%) and Polypropylene (-3.50%).

The shipment index in 2020 is expected to rise by 0.81 percent compared to last year. Upstream and downstream petrochemical products that highly contributed to the increase of MPI are Toluene (12.77%) and PET (6.33%).

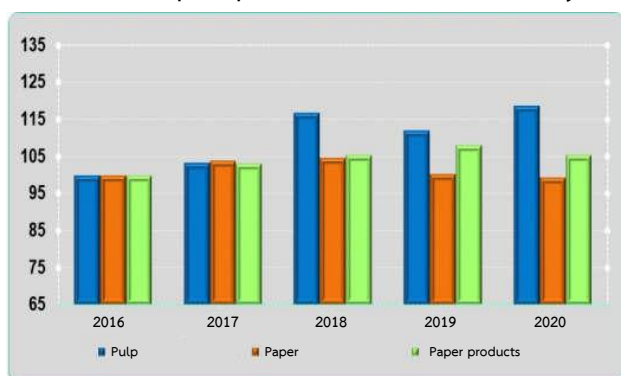
Petrochemical product exports in 2020 are expected to drop 18.03 percent compared to last year to 9,605.45 million USD. Upstream and downstream petrochemical products that decrease in export value are Para-Xylene (-30.92%) and PE resin (-16.89%).

Petrochemical imports in 2020 are expected to drop 8.62 percent compared to last year to 5,025.32 million USD. Upstream and downstream petrochemical products that decreased in import value are Para-Xylene (-30.92%) and PE resin (-14.49%).

Pulp, Paper and Print Media Industry

The pulp, paper, and print media industry in 2020 slowed down from the spread of COVID-19, following the direction of the domestic market of other related industries. The export sector was also affected. However, the packaging segment is likely to be driven by a substantial increase in orders from e-commerce businesses with an increase in online purchases.

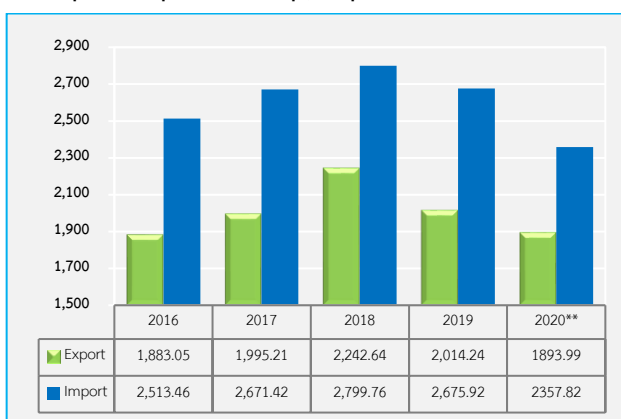
MPI in Pulp, Paper and Print Media Industry



Source: Office of Industrial Economics

Note: Information of year 2020 was estimated by the Office of Industrial Economics.

Export-Import of Pulp, Paper and Print Media



Source: Ministry of Commerce * Estimated figures in 2020

Note: Information of year 2020 was estimated by the Office of Industrial Economics.

Paper production in 2020 is expected to increase in MPI (%YoY) from the pulp by 5.97 percent from domestic and foreign market orders. This is especially from China, whereby Thailand exports 90 percent of total pulp exports to China. Paper and paper packaging is expected to slow down slightly by 0.82 percent and 2.56 percent, respectively, due to the COVID-19 outbreak since the beginning of 2020. It is expected that in the last quarter, production will increase with the consumption of food and beverages, automotive parts, pharmaceuticals, cosmetics, and e-commerce.

Exports of pulp, paper and print media in 2020 are expected to reach an export value of 1,893.99 million USD, down 5.97 percent (%YoY), from a decline in the paper and paper products segment, books, and publications, except pulp, where exports are projected to rise by 33.24 percent to China and France. The exports of paper and paper products are expected to decline by 8.32 percent, with major export markets such as Vietnam, Malaysia, and China. The book and publication segment are expected to contract by 24.69 percent due to a shift to digital media popularity.

Imports of pulp, paper and print media in 2020 are expected to have a total import value of 2,357.82 million USD, down 11.89 percent (%YoY). Imports of all products are expected to decrease, except paper products which are project to grow by 6.80 percent, especially in paper or cardboard that was reused in line with domestic demand.

2021 Outlook for Pulp, Paper and Print Materials Industry

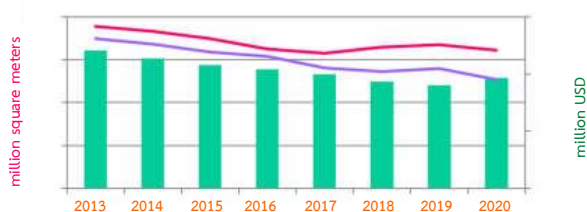
Production in pulp and paper products is expected to continue to grow from 2020, except for printing and writing paper which will continue to decline as the popularity of print media declines. For exports, the pulp segment is still in high demand from key importers such as China and continued purchase orders. Domestic consumption is expected to change with consumer behavioral changes after the COVID-19 outbreak, with the popularity of food delivery, online shopping, and ready-to-eat food businesses growing considerably. As a result, the opportunity for paper packaging and shipping to increase as well.

Ceramics Industry

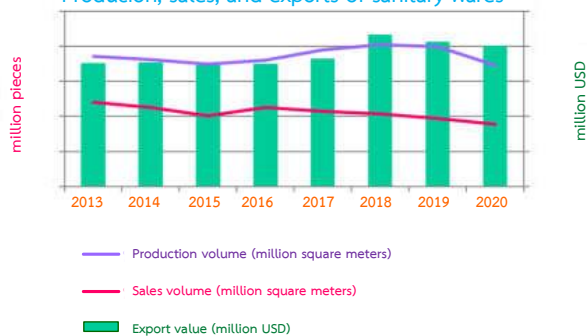
The volume of production and sales of ceramics in 2020 decreased from the previous year, following economic conditions and the spread of the COVID-19. Exports of floor and wall tiles increased from the number of orders in the CLMV market, especially from Laos. In 2021, the ceramics industry is expected to grow in production and domestic sales from demand after the COVID-19 situation resolves.

Production, Sales, and Exports of Ceramics

Production, sales, and exports of wall and floor tiles



Production, sales, and exports of sanitary wares



Source: 1. Production volume and domestic sales (estimated figures)—Division of Information and Industrial Economic Indices, Office of Industrial Economics
 Note: From the survey of 13 wall and tiling factories and 34 sanitary ware factories
 2. Export value—Information and Communication Technology Center, Office of the Permanent Secretary, Ministry of Commerce; and the estimation by Office of Industrial Economics

Production: In 2020, floor and wall tiles production reached 127.25 million square meters, a contraction of 8.90 percent (%YoY). The production volume of sanitary ware 6.93 million units, down from the previous year by 13.40 percent (%YoY) from the contraction in the domestic and export markets due to the spread of the COVID-19.

Sales: In 2020, sales volume of floor and wall tiles reached a sales volume of 161.25 million square meters, a decrease by 3.50 percent from the previous year (%YoY). The sales volume of sanitary ware reached 3.56 million units, an 8.92 percent decrease from the previous year (%YoY) due to the economy and the announcement of lockdown measures during the COVID-19 pandemic.

Exports: In 2020, exports of wall and floor tiles increased by 7.01 percent from the previous year (%YoY) to a value of 96.38 million USD from increased orders in the CLMV market, especially in Laos. Meanwhile, exports of sanitary ware decreased by 2.67 percent from the previous year (%YoY) to 200.01 million USD due to a contraction of orders from the US, Japan, and China markets.

2021 Outlook for Ceramics Industry

Domestic production and sales of ceramics in 2021 are expected to increase from domestic demand after the COVID-19 situation resolves, together with the government's economic stimulus packages. There are still important factors that may affect the growth, including the second wave of COVID-19 outbreaks, concerns about the domestic political situation, and the world economic situation. Overall, ceramic exports are expected to grow further from sanitary ware, tableware, souvenirs, jewelry, insulators, and other ceramic products. Main export markets for ceramic products are still Japan, the US, China, and the CLMV countries.

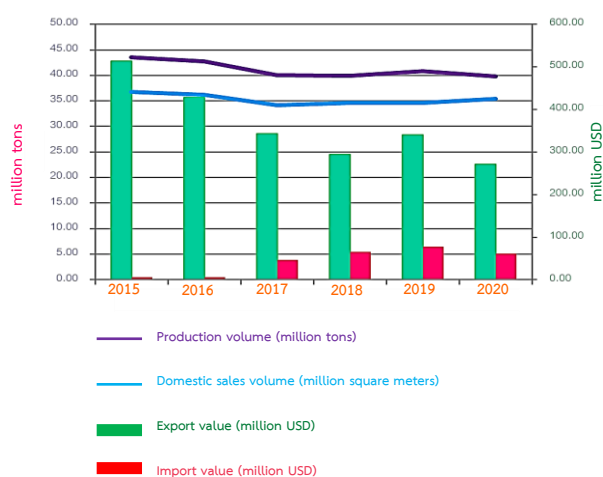
Government Policies Related to the Ceramics Industry

The Department of Science Service from the Ministry of Higher Education, Science, Research and Innovation piloted the promotion of research and development of ceramic technology, focusing on using scientific and technological processes to develop product quality to meet standards in Lampang. The project transfers technology to develop diverse product models that meet the needs of both domestic and international markets. It develops the production process to be more efficient and enhances the entrepreneurial potential in applying knowledge to further design and develop new products to achieve sustainable development and further enhance the country's competitiveness.

Cement Industry

The cement industry in 2020 decreased in production volume compared to the previous year due to the economy that has not recovered much. Sales, however, increased slightly due to large government projects. The export/import value decreased due to the economic impact of the COVID-19 pandemic and excess supply in the country.

Production and Sales volume
Export and Import Value of Cement



Source: 1. Production volume and domestic sales (estimated figures)—Division of Information and Industrial Economic Indices, Office of Industrial Economics
2. Export/Import value—Information and Communication Technology Center, Office of the Permanent Secretary, Ministry of Commerce; and the estimation by Office of Industrial Economics

Cement production (excluding clinker): In 2020, production decreased by 2.62 percent (%YoY) to 39.87 million metric tons, from the economic impact that has not yet recovered much from the effects of the COVID-19 outbreak.

Domestic sales of cement (excluding clinker): In 2020, sales reached 35.39 million metric tons, a slight increase of 2.08 percent (%YoY) due to the growth of infrastructure construction and the acceleration of large-scale government projects in various areas.

Cement exports/imports (excluding clinker): In 2020, export value dopped 20.23 percent from the previous year to 271.91 million USD. The contraction resulted from consumer uncertainty due to the COVID-19 outbreak that has not disappeared, especially in neighboring countries, which are the main export markets of Thailand. The import value was 90.91 million USD, a decrease from the previous year by 21.17 percent (%YoY) as the domestic market still has a large excess supply.

2021 Outlook for Cement Industry

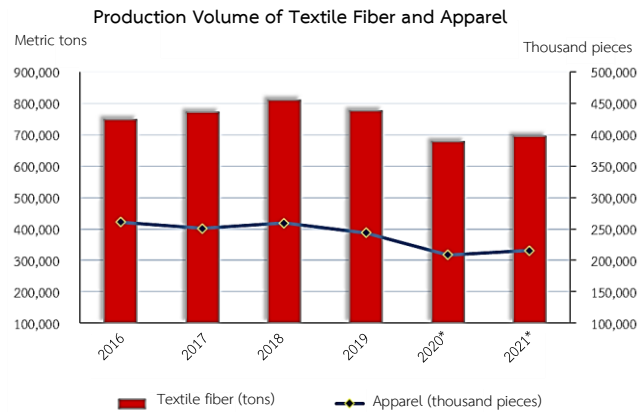
For the cement industry (excluding clinker) in 2021, cement production (excluding clinker) is expected to expand slightly due to the accelerated growth of the government's large-scale infrastructure for both existing and new projects. However, cement sales (excluding clinker) declined slightly as the real estate sector in 2020 had a lot of stock. In addition, there was uncertainty in the economic conditions due to the effects of the COVID-19, which had not been exhausted. It is expected to continue for at least the first half of 2021 or until the acquisition of vaccines is definite.

Government's policies related to the Cement Industry

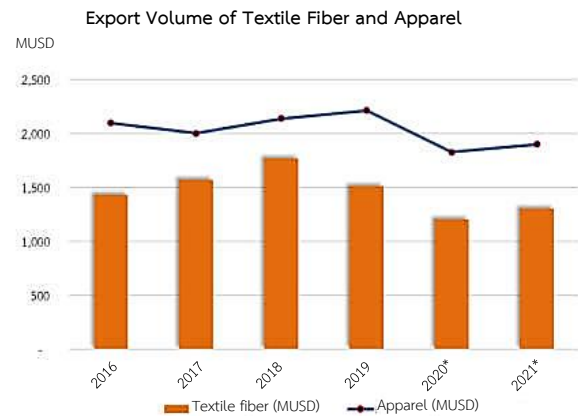
The government is trying to stimulate the economy to achieve turnover and higher growth rates for the people to have increased incomes. In the past, the Cabinet approved three key measures to stimulate domestic short-term spending: the measure to top up the state welfare card, the "Half Each" project, and the "Shop Dee Me Kuen" project. Although these government stimulus policies do not directly stimulate the purchasing power of cement, they may help to create a positive atmosphere for residential businesses in the future. The policies further accelerate the expansion of infrastructure construction for both old and new projects and will be another positive factor in stimulating real estate construction in the area.

Textile and Apparel Industry

Production and exports of textile fibers, fabrics, and apparel in 2020 are expected to slow down due to the global economy slowing from the impact of the coronavirus outbreak since the beginning of the year. Although the production and exports in Q3/2020 showed signs of improvement, overall, the industry is still unable to expand in 2020.



Source: Office of Industrial Economics/Ministry of Commerce
Information of 2020-2021 is the estimated figures.



Production

Textile fibers, fabrics and apparel in 2020 are expected to contract by 12.40 percent, 28.07 percent, and 14.37 percent, respectively, compared to the previous year. The contraction is due to the global COVID-19 outbreak affecting the purchasing power of domestic consumers and exports. As a result, the production from upstream raw materials to ready-made garments decreased.

Domestic Sales

Textile fibers, fabrics and apparel in 2020 are expected to contract by 21.17 percent, 25.30 percent, and 28.30 percent, respectively, due to a decrease in demand for raw materials for export. In addition, the purchasing power of domestic consumers slowed from the impact of the COVID-19 outbreak.

Exports

Overall exports of textiles and apparel in 2020 are expected to value 5,715.83 million USD, down 17.28 percent (%YoY). Considering the product categories, textile fibers are expected to value 1,201.60 million USD, down by 20.40 percent, whereas ready-made garments are projected to value 1,828.20 million USD, down by 17.46 percent. The contraction is caused by the global economy that slowed down from COVID-19 outbreaks. Major markets that contracted were the US, China, Japan, and Vietnam.

2021 Outlook for Textiles and Garments Industry

Production, exports, and domestic sales of textile fibers, fabrics, and apparel are expected to grow from 2020, in line with the recovering global economy, rising from domestic economic stimulus measures in the consumption and tourism sectors. In addition, there are economic stimulus measures in many countries, and the vaccine against the COVID-19 is expected to be available in 2021.

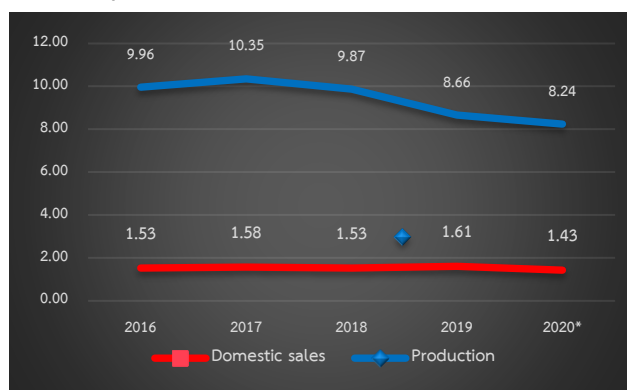
Relevant Government Policies

- The government's economic stimulus measures, such as phase 2 for the "Co-payment" scheme and the "Shop Dee Mee Kuen" program, increase households' purchasing power.
- The government's policy to promote S-curve target industries. Textile and garment businesses should take this opportunity to accelerate the development of special property fibers of high quality and variety to increase channels and market opportunities for other downstream industries such as bacteria-resistant fibers and breathable fabrics in the medical equipment industry.

Wood and Wooden Furniture Industry

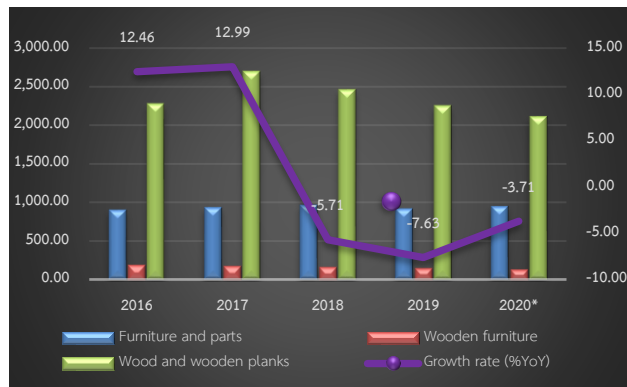
In 2020, production and domestic sales of wooden furniture is likely to decrease by 4.85 percent and 11.18 percent compared to the previous year, respectively, due to the slowdown in the domestic economy. The export value of wood and wooden products is expected to decrease by 3.71 percent compared to the previous year due to the COVID-19 outbreak in major export markets.

Domestic Production and Sales of Wooden Furniture (million pieces)



Source: Office of Industrial Economics Note: *estimated value

Export Value of Wood and Wooden Products (million USD)



Source: Ministry of Commerce Note: *estimated value

Production of wooden furniture: In 2020, production is expected to reach 8.24 million units, a decrease of 4.85 percent compared to the previous year, caused by a decrease in domestic and international orders.

Domestic sales of wooden furniture: In 2020, sales are expected to reach 1.43 million units, a decrease of 11.18 percent compared to the previous year, from a slowdown of the domestic economy affected by the COVID-19 outbreak earlier this year. Although the government could control the outbreak domestically, the economic sector is still affected by the general ban on foreign tourists from entering the country.

Exports of wood and wooden products: In 2020, exports are expected to reach a value of 3,191.84 million USD, down 3.71 percent compared to the previous year. The export value of furniture and parts are expected to reach 948.87 million USD, an increase of 1.27 percent compared to the previous year. In contrast, wooden products and wood and wooden sheet products are expected to value 2,114.12 million USD and 128.85 million USD, contracting by 5.33 percent and 10.89 percent, respectively. The contraction is mainly due to the coronavirus outbreak in many countries worldwide, including countries that are important export markets to Thailand, such as China, the US, and Japan.

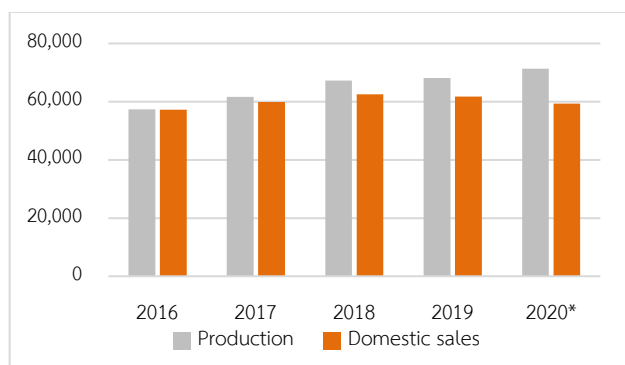
2021 Outlook for Wood and Wooden Furniture Industry

The production of wooden furniture in 2021 is predicted to increase compared to last year, from the production to meet the needs of the domestic and international markets. Also, domestic sales of wooden furniture are expected to increase compared to the previous year. This is partly due to the domestic economic stimulus package and the opening for tourists and businessmen to enter the country. The export value of wood and wooden products is expected to increase compared to the previous year from the recovery of major export markets.

Pharmaceutical Industry

Production and domestic sales volumes in 2020 are expected to increase from the previous year. The increase is in line with an increase in demand due to the COVID-19 outbreak of domestic and overseas markets. As for exportation, it is projected that exports will expand in Cambodia, Vietnam, and Japan markets.

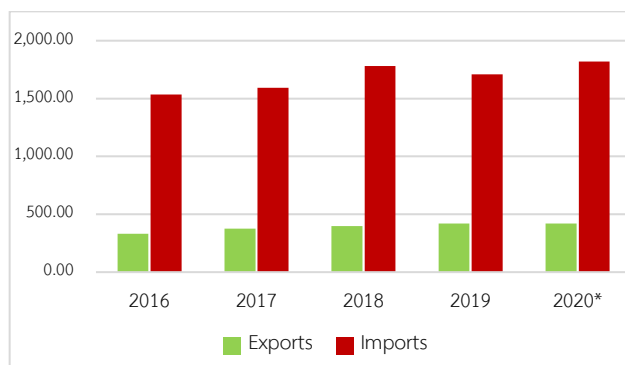
Domestic Production and Sales (tons)



Source: Office of Industrial Economics Note: *estimated value

Production: In 2020, pharmaceutical production is expected to reach a volume of 71,306.42 tons, an increase of 9.97 percent from the previous year, mainly due to the growth in production of tablets, liquids, capsules, injections, and creams, as orders increased to stockpile as consumers became concerned about the shortage of supply while the country gradually shut down. Also, there was a suspension of exports of pharmaceutical raw materials and drugs from Thailand's key trading partners such as China and India, coupled with the rising demand from hospitals across the country from pre-prescribing medicines to chronic patients.

Pharmaceuticals Import-Export Value (Million USD)



Source: Ministry of Commerce Note: *estimated value

Sales: In 2020, pharmaceutical sales are expected to reach 59,372.12 tons, an increase of 1.66 percent, in line with domestic demand that rose from the COVID-19 outbreak.

Exports: In 2020, pharmaceuticals exports are expected to value 421.65 million USD, a growth of 0.40 percent from the previous year due to market expansion in Cambodia, Vietnam, and Japan. However, the delay and difficulty of international shipping was a major factor that pressured the Thai pharmaceutical export value this year. Pharmaceutical imports are expected to value 1,818.60 million USD, an increase of 6.33 percent from the previous year, with an increase of imports from India, Germany, and France.

2021 Outlook for Pharmaceutical Industry

The manufacture of pharmaceuticals in 2021 is expected to grow by 5.26 percent following a good expansion of both domestic and international markets, whereby key markets that are expected to continuously increase from last year were markets in ASEAN region, especially Vietnam and Myanmar.

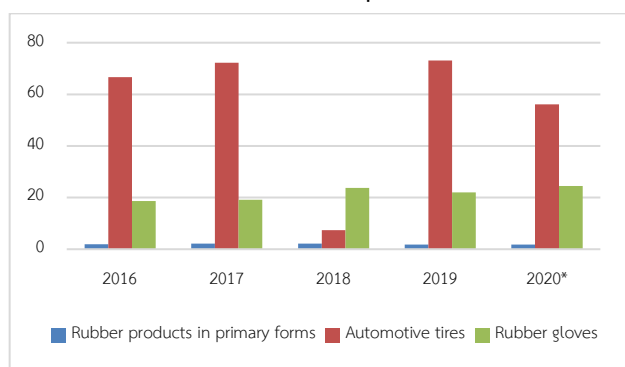
Government Policies Related to Pharmaceutical Industry

The Ministry of Public Health has allocated a budget of over 6,049 million Baht. It has signed a purchase agreement for the COVID-19 vaccine with AstraZeneca Thailand and AstraZeneca UK for 26 million doses, with 13 million doses targeted for vulnerable populations by mid-2021. Siam Bioscience Co., Ltd. Will engage in technology transfer, making Thailand a production base for the vaccine against COVID-19, the first of its kind in Southeast Asia. This initiative will further strengthen research and development in the Thai pharmaceutical and biological manufacturing industry.

Rubber and Rubber Products Industry

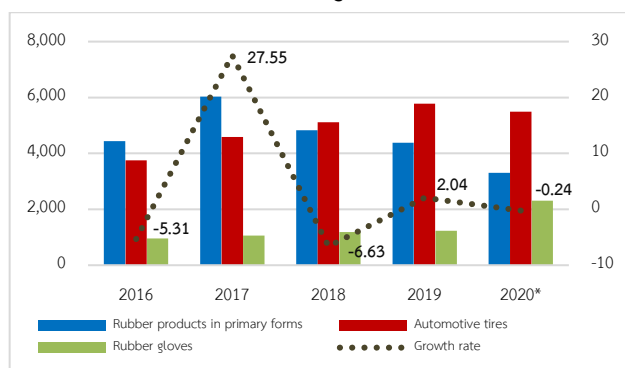
The production of upstream processed rubber and tires in 2020 is expected to decline from the previous year in line with the drop in rubber production entering the market and the slowdown in the replacement market of the domestic automotive industry and exports. Meanwhile, the production of rubber gloves increased in line with the global demand for medical use.

Production volume of processed rubber in primary forms, automotive tires and rubber glove (million metric tons/million tires/billion pieces)



Source: Office of Industrial Economics Note: *estimated value

Export Value of processed rubber in primary forms, automotive tires and rubber gloves (million USD)



Source: Ministry of Commerce Note: *estimated value

Production of processed rubber in primary forms, automotive tires and rubber gloves in 2020 is expected to reach 1.78 million metric tons, 56.17 million tires, and 26,462.41 million pieces, respectively. The production of processed rubber in primary forms and tires decreased by 7.36 percent and 19.81 percent, respectively, which was in line with the decrease in raw materials entering the market and the slowdown in domestic and international markets. Meanwhile, the production of rubber gloves increased by 23.81 percent, in line with the higher demand.

Sales of processed rubber in primary forms, automotive tires, and rubber gloves in 2020 are expected to reach 445,000 tons, 36.87 million tires, and 3,487.30 million pieces, respectively. Automotive tire sales dropped by 15.86 percent from the previous year, in line with the economic slowdown. Meanwhile, the sale of upstream processed rubber and rubber gloves increase 1.42 percent and 12.02 percent, respectively, in line with the continued higher demand for medical gloves.

Exports of processed rubber in primary forms, automotive tires and rubber gloves in 2020 are expected to value 3,303.13 5,490.59 and 2,303.22 million USD, respectively, from the slowdown in the Chinese and US markets. Rubber glove exports increase by 91.44 percent, in line with the favorable expansion of the US market.

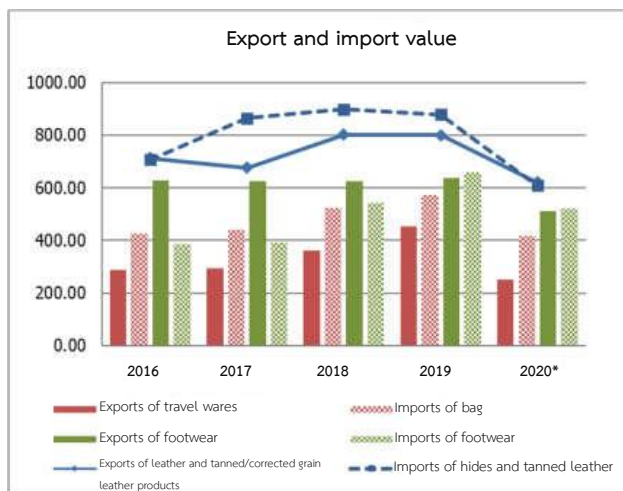
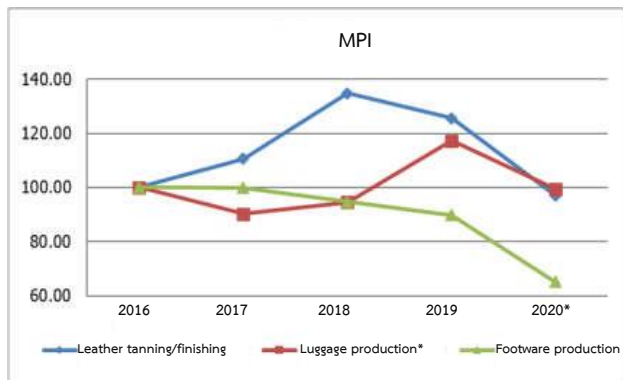
2021 Outlook for Rubber and Rubber Products Industry

Production of upstream processed rubber, automotive tires, and rubber gloves in 2021 is expected to grow by 9.81 percent, 4.98 percent, and 8.61 percent, respectively, due to the relatively low base of upstream processed rubber and automotive production in 2020. Meanwhile, the COVID-19 outbreak will result in domestic and international markets having a constant demand for medical gloves.

Footwear and Leather Products Industry

Compared to last year, in 2020, leather tanning/finishing, luggages, and footwear decreased in production, which was in line with declining demand, both for export and domestic sales, due to the COVID-19 outbreak. As a result, international trade contracted. Consumers are being cautious about spending and are also worry about the current economic climate.

Production, Exports, and Imports (million USD)



Source: 1. MPI—Office of Industrial Economics;

2. Export and import value—Ministry of Commerce

*including handbags and similar products, saddles, and harnesses

Production

In 2020, leather tanning and finishing decreased in the MPI by 22.77 percent compared to last year. Likewise, the production of luggage* and footwear production contracted by 15.18% and 27.56% due to declining demand in both exports and domestic sales. Consumers were more cautious with their spending, which is affected by the situation of the COVID-19 outbreak.

Exports/Imports

Exports in 2020 totaled 1,383.32 million USD, a 26.77 percent decrease compared to the previous year as a result of a decline in export value of leather and tanned/ corrected grain leather products (-22.33%), leather travel wares (-44.34%), and footwear and parts (-19.90%). Due to the COVID-19 outbreak, the global economy slowed down; the main export markets are Vietnam, China, the US, Switzerland, and Myanmar.

Imports in 2020 valued at 1,544.93 million USD, a 26.84 percent decrease from the previous year. This resulted from imports of animal hides/tanned leather, luggage, and footwear which decreased by 30.83 percent, 27.33 percent, and 21.08 percent, respectively. Key import markets were Denmark, Argentina, Italy, France, China, and Vietnam.

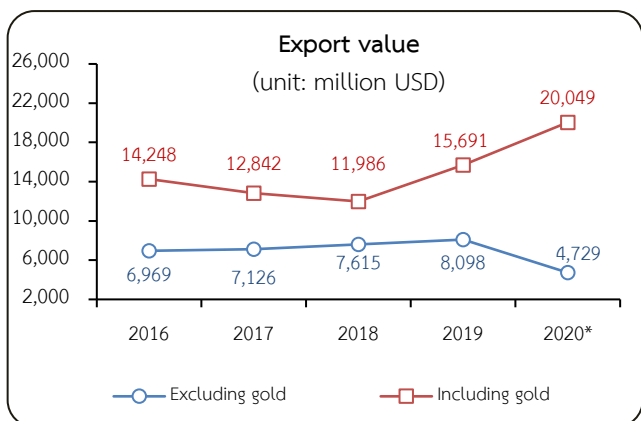
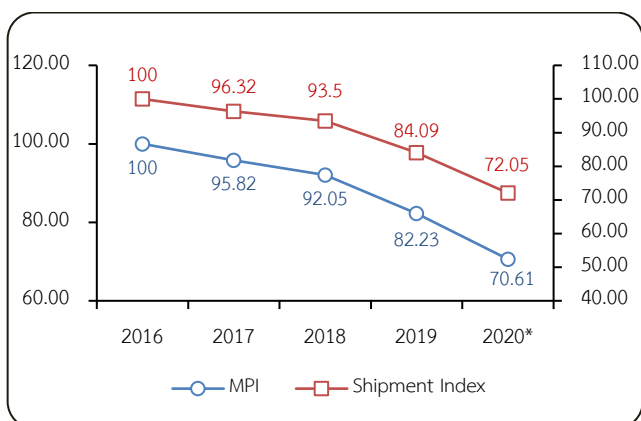
2021 Outlook for Footwear and Leather Product Industry

The production of footwear and leather products in 2021 is expected to improve in all product groups, including the production of tanned leather and leather finishing, luggage, and footwear from domestic sales and exports, which began to recover due to the COVID-19 pandemic, which should be resolved. Furthermore, the government sector has measures to stimulate domestic spending and investment, including promoting tourism from foreigners by providing the Special Tourist Visa (STV). Imports of all products are expected to return to growth. Raw material and tanned leather are expected to increase in the same direction as the manufacturing sector, including luggage and footwear products that will increase import value.

Gems and Jewelry Industry

Production and sales of gems and jewelry in 2020 decreased by 16.03 percent and 12.38 percent, respectively, compared to the previous year due to a decrease in export-oriented manufacturing and domestic sales from the COVID-19 outbreak. This resulted in consumers more careful with their spending. As for exports, the value decreased following the global economic slowdown.

Production, Sales, and Exports



Source: 1. MPI and Shipment Index —Office of Industrial Economics;
2. Export and import value—Ministry of Commerce

Production

Overall gems and jewelry production in 2020 decreased by 16.03 percent compared to the previous year due to a decrease in export-oriented manufacturing caused by the COVID-19 outbreak. The production of cut diamonds, genuine jewelry, and imitated jewelry dropped 69.00 percent, 3.80 percent, and 41.67 percent, respectively.

Sales

In 2020, gems and jewelry sales decreased by 12.38 percent compared to the previous year as consumers are more careful with their spending and worry about the current economic situation.

Exports

In 2020, gems and jewelry (excluding gold) exports decreased by 41.61 percent compared to the previous year to 4,728.60 million USD from a decrease in export value of diamonds (-41.39%), colored stones (-60.81%), genuine jewelry (-30.52%), and imitated jewelry (-41.37%). Key export markets included Hong Kong, the US, India, and Germany. However, considering the overall gems and jewelry exports, the value grew by 27.77 percent to 20,048.88 million USD from an increase in exports of unwrought gold (101.75%).

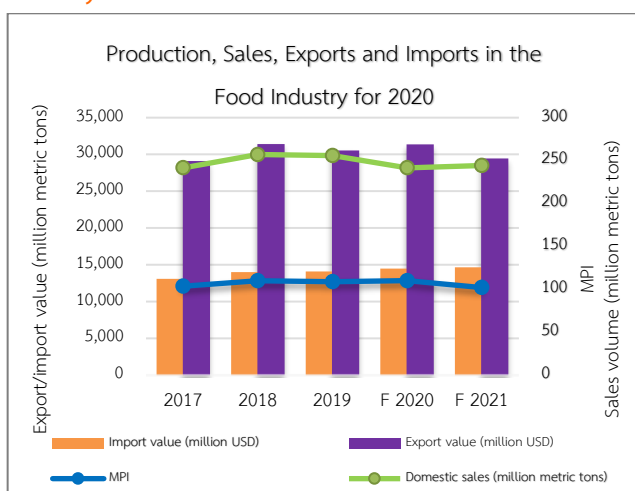
2021 Outlook for Gems and Jewelry Industry

In 2021, overall gem and jewelry production is expected to remain stable or increase slightly compared to the previous year. The growth comes from domestic sales and exports that are expected to recover due to the COVID-19 pandemic, which should be resolved. Furthermore, the government sector has measures to stimulate domestic spending and investment, including promoting tourism from foreigners with the Special Tourist Visa (STV) category. In addition, the 2020 database remained low. Imports (excluding unwrought gold) are expected to increase.

Food Industry

The MPI and exports of the overall food industry in 2020 are expected to contract compared to the previous year due to droughts that reduced agricultural raw materials such as sugar cane and cassava. The impact of the COVID-19 outbreak also led to a decrease in domestic consumption from measures to refrain foreign tourists from entering the country and the slowdown of domestic consumers. However, some products benefited from such situations, such as processed fruits and vegetables, especially canned fruits and vegetables, canned fish, condiments, chilled and frozen chicken, and prepared pet food. The export value contracted from the global economic slowdown, the effect of strict lockdown measures, and exporting problems of food products by sea vessels.

Production, Sales, Exports and Imports in the Food Industry for 2020



Source: 1) MPI from Office of Industrial Economics
2) Import/export value derived from Ministry of Commerce and grouped by the Office of Industrial Economics

The MPI of the food industry in 2020 reached 102.1 points, a contraction by 5.0 percent from 2019 (%YoY) due to droughts that reduced agricultural raw materials such as sugarcane and cassava. The impact of the COVID-19 pandemic led to a decrease in domestic consumption due to the prohibition of foreign tourists and the slowdown in consumption of domestic markets. However, some products benefitted from the situations, processed fruits and vegetables, especially canned fruits and vegetables, canned fish, seasonings, chilled and frozen chicken, and prepared pet food.

2021 Outlook for Food Industry

The MPI of the overall food industry in 2021 is expected to increase by 2.3 percent from the same period of last year due to increased agricultural products such as cassava and pineapples, which increased the previous crop year. In addition, in 2021, there are signs for the delivery of the COVID-19 vaccines. As a result, the economy is expected to recover. Consumers will begin to have purchasing power leading to increased demand for basic food products and ready-made food, both in the domestic and foreign markets, including products such as chilled and frozen chicken meat, seasoned cooked chicken meat, frozen shrimp, canned fruits, tapioca starch, and instant pet food. However, the Office of the Cane and Sugar Board or OCSB estimates that sugar cane production in 2020 to 2021 will not exceed 70 million metric tons, a decrease of about 5 million metric tons from the previous year, resulting in the contraction of sugar production.

Domestic food sales in 2020 reached 244.1 million metric tons, a slight contraction from 2019 by 0.1 percent (%YoY) due to the sale of sugar products, cassava starch, and palm oil due to the decline in foreign tourists. However, the purchasing power of consumers trended to recover as the government stimulated the economy through the “We Travel Together” scheme, “Co-payment” scheme, and the program to increase the purchasing power for people with state welfare cards, including measures to open up the country to special, long-stay tourists.

Exports in 2020 valued 29,445.5 million USD, a contraction from 2019 by 3.7 percent (%YoY) from exports of important products such as sugar and cassava products, due to droughts that resulted in a reduction of agricultural raw materials. Chilled and frozen shrimp and processed chicken also contracted from a slowdown of the world economy, including the country's lockdown. Rice also declined due to the lack of competitiveness in price with competitors like India and Vietnam.

Imports in 2020 valued at 14,655.8 million USD grew slightly from 2019 by 0.1 percent (%YoY) from chilled and frozen tuna, as demand for canned tuna increased for food security reserves. Oilseeds (soybeans) increased from the needs of the soybean oil industry and the import of milk and dairy products to support the expansion of the dairy and other food industries that continued to grow.

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