

## Table of Contents

	Page
<b>Executive Summary</b>	3
<b>Part 1</b> Thailand Economic and Industrial Overview in 2021 and Outlook for 2022	6
<b>Part 2</b> Sectoral Industrial Economic Conditions of Thailand in 2021 and Outlook for 2022	15
2.1 Iron and Steel Industry	16
2.2 Electrical Industry	17
2.3 Electronics Industry	18
2.4 Automobile and Parts Industry	19
2.5 Motorcycle and Parts Industry	20
2.6 Chemical Industry	21
2.7 Plastics Industry	22
2.8 Petrochemical Industry	23
2.9 Pulp, Paper and Print Media Industry	24
2.10 Ceramics Industry	25
2.11 Cement Industry	26
2.12 Textile and Apparel Industry	27
2.13 Wood and Wooden Furniture Industry	28
2.14 Pharmaceutical Industry	29
2.15 Rubber and Rubber Product Industry	30
2.16 Footwear and Leather Product Industry	31
2.17 Gems and Jewelry Industry	32
2.18 Food Industry	33


## Executive Summary


### Summary of the Thai Industrial Economic Status in 2021 and outlook for 2022

The industrial economy in 2021, when considered from the Manufacturing Production Index (MPI), is expected to expand by 5.2 percent, while in 2020, the MPI contracted by 9.3 percent. **Key industries that expanded in 2021 included the automobile industry** by increasing in the export market and expansion of trading partners' economic activity due to the COVID-19 pandemic situation easing also the domestic market is still slowing down. **Electronic components** this is a result of the increasing demand for electronic products in the world to support the need for Cloud Computing and Data Centers, including the need for equipment for work and distance education. The increasing export value in the main markets is ASEAN, the EU, the United States of America and China. **Iron and steel** increased in both long and flat steel products. Products in the long steel group increased from large government infrastructure construction projects, for products in the flat steel group increased from the production of continuous industries such as the automobile industry. **Air conditioners** as a result of the low base in the previous year, due to the COVID-19 outbreak. The initial wave impacted the whole world, resulting in a lack of parts for producing items, due to lockdowns in many countries. **Furniture** because the world economy is getting better and the problem of the COVID-19 outbreak in foreign countries began to unravel, resulting in more orders pouring in. Major customers from the United States of America, the EU and Japan, as well as the market inside the country have placed more orders metal furniture.

### Outlook for 2022

The Manufacturing Production Index (MPI) for 2022 is expected to expanded in the range of 4.0 – 5.0 percent, from supporting factors: (1) Export markets continued to expand due to the economic expansion of trading partner countries. (2) The domestic market has begun to recover from the relaxation of government control measures and various economic stimulus measures and (3) In part of the establishment, the spread of the COVID-19 pandemic has improved and the vaccine distribution is comprehensive and widespread. However, the pandemic scenario remains unpredictable and researchers must continue to closely monitor pandemics involving new species.

 Iron and Steel: It is expected that production will increase slightly about 0.4 percent compared to the previous year for iron consumption, it is expected to increase by 5.0 percent, supported by the expansion of continuous industries such as the construction industry, especially government infrastructure construction projects and promoting the domestic industry. This is expected to result in the production volume and the consumption of steel products in the country increasing. There are important issues to be followed, such as the economic situation and world trade, decreasing production capacity from China and energy and transportation costs which affecting steel prices.

 Electrical Appliances: It is expected that production and exports will increase by 3.0 percent and 5.0 percent respectively, compared with the previous year. The global economy, as well as Thailand's main export market is recovering from the COVID-19 pandemic. Innovation in modern technology, particularly electrical appliances is focusing on health and selling products through online channels make

it easier for consumers to access information and make purchasing decisions. As a result, demand for electrical appliances is expected to continue to rise in 2022.

↑ Electronics: It is expected that the production and exports of electronic products will increase by 5.0 and 8.0 percent respectively, compared to the previous year. Due to the global economy recovering from the COVID-19 outbreak situation and the adjustment of semiconductor product manufacturers from the situation of chip shortage. As a result, there is a constant demand for electronic products including the development and improvement of 5G technology and the Data Center, resulting increased demand for electronic products both inside the country and abroad.

↑ Automobiles: It is expected that automobile production will reach approximately 1,700,000 units, increasing 6.25 percent from the same period last year. Approximately 45-50 percent of the production is expected to be sold domestically and 50-55 percent for export.

↔ Motorcycles: It is expected 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: Production of pulp and paper products is expected to expand and has increased continuously since 2021, except for printing and writing paper which will continue to decline as the popularity of print media declines. The pulp group is still in demand for export from major importers such as China. And new orders are coming continuously. In terms of domestic consumption, it is projected that following the COVID-19 outbreak, which will result in a shift in consumer behavior, internet shopping and the food industry in the form of ready-to-eat food would increase at an exponential rate. Thus increasing the opportunity for paper packaging for packaging and transportation.

↑ Cement: Production of cement (excluding clinker) is expected to be able to expand further from positive factors such as the acceleration of the government's expansion of large-scale infrastructure projects, existing and new initiatives and from the economic recovery that will gradually improve, if the COVID-19 outbreak decreased significantly and there were no negative factors to affect again, for export in the main export market expected to be able to return to expand as well. If the outbreak of the COVID-19 have a better situation especially countries in the CLMV group because their governments are developing large-scale infrastructure projects in the country.

↑ Textile fibers and Wearing Apparel: Production, exports and domestic sales, textile fiber products, fabrics and ready-to-wear apparel are expected to expand. Domestic purchasing power should begin to recover as a result of the country opening, as well as to support the supply chain's ongoing demand from foreign countries, even if have a risk factors such as rising freight prices and the impact of China's energy limitations. As a result, raw materials such as yarns and polyester fibers increased in price due to a new wave of the pandemic emerging.

↑ Wood and Wooden Furniture: The trend will increase compared to the previous year from production to meet the needs of both domestic and international markets, while the domestic sales of wooden furniture are expected to increase compared to last year caused by the relaxation of pandemic control measures and allowing foreign tourists to travel into the country. This will aid in the recovery of the domestic economy. In terms of the export value of wood and wooden products, it is predicted to rise compared to last year as the global economy and the economies of key export markets continue to recover.

↑ Pharmaceuticals: It is expected to increased by 5.00 percent following the growing trend of the market both domestically and internationally. Due to the low base of the year 2021, the main export market is expected to expand continuously from the previous year is Laos, other key markets, especially Myanmar, Vietnam, Cambodia, the Philippines and Singapore are expected to recover but there may be a growth rate that is not very high.

↑ Rubber and Rubber Products: The production of processed rubber in primary forms, automotive tires and rubber gloves in 2022 are expected to expanded by 3.00 percent in every product follow the global market's expansion due to the easing of the outbreak situation in many countries, the manufacturing sector and domestic consumption have recovered again.

↑ Gems and Jewelry: It is expected that the production of diamonds, genuine jewelry and artificial jewelry will have a better trend as all countries accelerate vaccination to prevent the spread of the COVID-19. People will gain confidence and begin spending, as a result of this and opening the country to tourists will assist the gem and jewelry trade to enhance domestic sales, exports and imports.

↑ Food: The MPI of the overall food industry in 2022 will expand continuously when compared to the year 2021 due to the recovery of the global economy. As a result, food exports tend to expand in the line with global economic growth. At the same time, Thailand has opened the country for the tourists and relax various measures in the country, allowing economic activity and consumption to gradually revive. Furthermore, significant agricultural raw resources such as sugar cane, oil palm, cassava and pineapple are predicted to rise starting in 2021. The food industry has enough raw materials. into the factory. It is expected that food products that have a good tendency to expand are tapioca starch, sugar, palm oil, frozen shrimp, instant pet food.

## Part 1: Summary of the Thai Industrial Economy in 2021 and Outlook for 2022

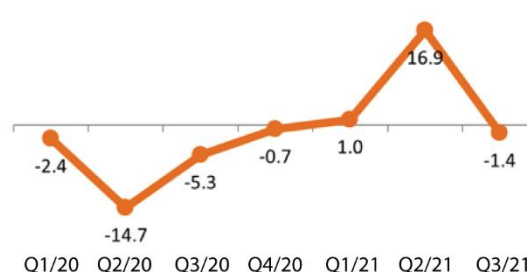
## Thailand's Economic and Industrial Overview in 2021 and Outlook for 2022

GDP of the first three quarters increased by 1.3 percent (%YoY)



Source: The Office of the National Economic and Social Development Board

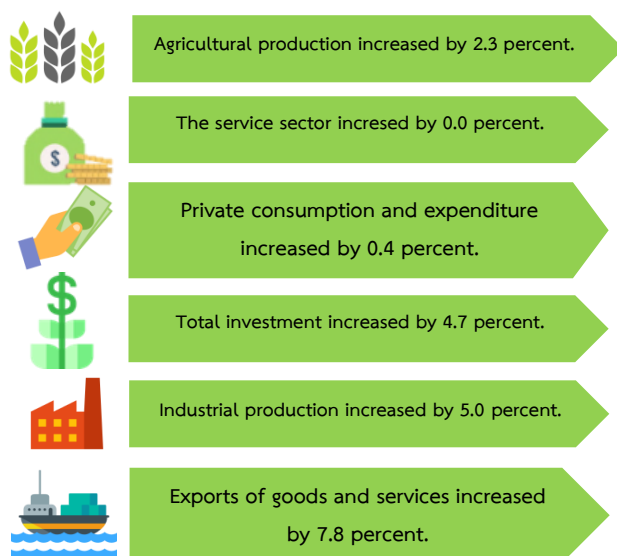
Industrial Sector's GDP of the first three quarters increased by 5.0 percent (%YoY)



Source: The Office of the National Economic and Social Development

Gross domestic product or GDP in the first three quarters of 2021 increased by 1.3 percent compared with the first three quarters of 2020 which decreased by 6.8 percent.

Key factors affecting the GDP during the first three quarters of 2021



In the first three quarters of 2021, agricultural production increased by 2.3 percent. The service sector increased by 0.0 percent. Private consumption and expenditure increased by 0.4 percent. Total investment increased by 4.7 percent. Industrial production increased by 5.0 percent. Exports of goods and services increased by 7.8 percent.

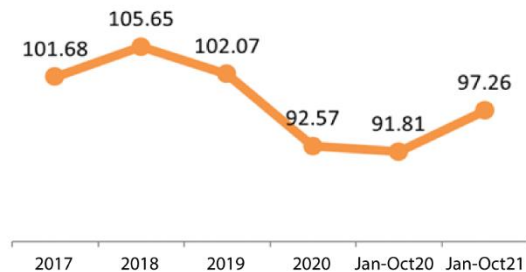
The industrial sector GDP in the first three quarters of 2021 improved over the same period last year, especially in industrial establishments, as a result of the third and fourth waves of domestic response to the COVID-19 pandemic in late April and early June, resulting in uninterrupted production able to meet both domestic and international demand.

The industrial sector GDP of the first three quarters of 2021 increased by 5.0 percent from the same period last year, which contracted 7.4 percent. The expansion was mainly driven by foreign demand in the automobile category from major trading partners countries and new markets from South Africa and Mexico.

Thailand's economic outlook in 2022 is expected to expand in the range of 3.5 - 4.5 percent, supported by factors such as (1) The recovery of domestic demand and the manufacturing sector following the COVID-19 outbreak situation that tends to ease. (2) The recovery of the international tourism sector under the government's open country policy and (3) Favorable expansion of product exports.

## Key Industrial Indices

*Manufacturing Production Index in  
Jan.- Oct. 2021 increased by 5.93 percent  
(%YoY)*



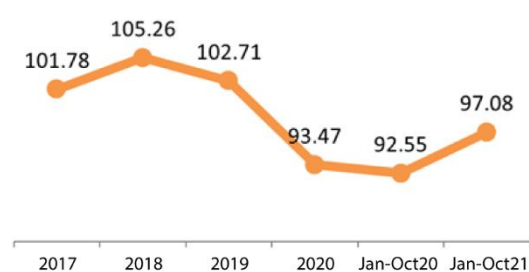
Source: The Office of Industrial Economics

During the first 10 months (January - October) of 2021, the Manufacturing Production Index (MPI) was 97.26 points, an increase of 5.93 percent from the same period of 2020 (91.81 points).

Industries that cause the Manufacturing Production Index to increase from the same period of 2020, include automobile production, manufacturing of electronic components and circuit boards and the production of basic iron and steel.

The Manufacturing Production Index in 2022 is expected to improve gradually more than 2021 and may return to the equivalent of 2018, depending on the situation of the COVID-19 pandemic (Omicron) in early December 2021. Pandemic control, including vaccination to build immunity.

*Shipment Index in  
Jan. - Oct. 2021 increased by 4.89 percent  
(%YoY)*



Source: The Office of Industrial Economics

During the first 10 months (January - October) of 2021, the Shipment Index stood at 97.08 points, an increase of 4.89 percent from the same period of 2020 (92.55 points).

Industries that contributed to the increase of the Shipment Index in 2020 were the manufacture of automobiles, the manufacturing of electronic components and circuit boards and the production of air conditioners.

The Shipment Index is predicted to be in line with the manufacturing production index in 2022, according to the forecast.

*Finished Goods Inventory Index In Jan. – Oct. 2021  
increased by 13.31 percent (%YoY)*



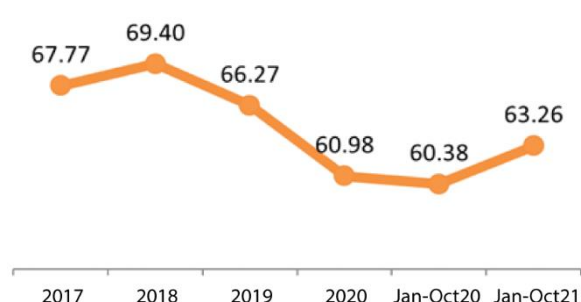
Source: The Office of Industrial Economics

During the first 10 months (January - October) of 2021, the Finished Goods Inventory Index was 145.38 points, increasing by 13.31 percent from the same period of 2020 (128.31 points).

Industries that contributed to the increase of the Finished Goods Inventory Index from the same period in 2020 were the manufacturing of automobiles; manufacturing of computers and peripherals and manufacturing of other rubber products.

Outlook for 2022 is expected that the Finished Goods Inventory Index increased from 2021. According to the current economic circumstances, the industry has started to recover from the COVID-19 pandemic and is producing products for delivery to clients by the end of the year. Furthermore, it is a product that is awaiting delivery to customers from the situation of waiting for cargo ships from the situation of collecting freight, which has steadily increased since the beginning of 2021, causing operators to face problems with increased freight rates and attempting to find boat trip shipping more difficult than before.

*Capacity Utilization Rate  
stood at 63.26 percent*



Source: The Office of Industrial Economics

During the first 10 months (January - October) of 2021, the Capacity Utilization Rate was 63.26 percent, increasing from the same period of 2020 by 60.38 percent.

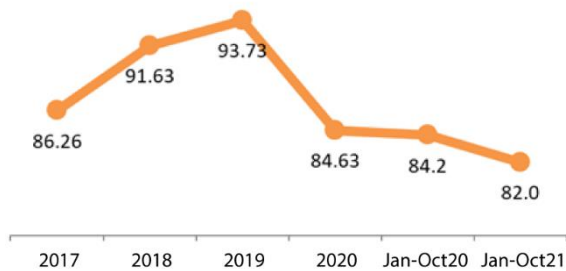
Industries that contributed to the decrease of the Capacity Utilization Rate from the same period in 2020 were the manufacture of automobiles, air conditioners and basic iron and steel.

Outlook for 2022 is expected that, as the government relaxes the lockdown measures easing economic activity, the Capacity Utilization Rate is likely to improve. Production and services have nearly resumed regular operations, while measures to avoid the spread of COVID-19 in factories and facilities remain in place.



### *Industrial Sentiment Index*

*in January – October was at 82.0*



Source: The Federation of Thai Industries

During January – October 2021, the average Industrial Sentiment Index was 82.0 points, decreasing from the same period of 2020 by 84.24 points. The three-month forecast of the Sentiment Index stood at 92.07 points, decreasing from the same period of 2020 by 93.66 points.

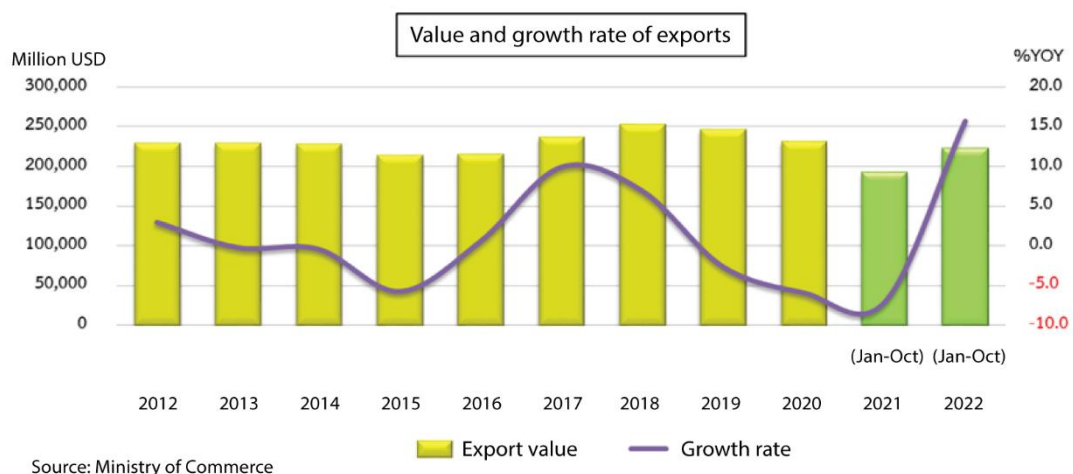
Outlook for 2022 is expected that, due to the reduction of lockdown measures in the COVID-19 pandemic, the industrial confidence index is predicted to increase. This resulted in a recovery of economic activity and domestic demand, which benefited the manufacturing and industrial sectors. However, the new Omicron mutation found as the current Delta strain must still be monitored. Energy prices and labor shortages must also be considered, particularly in the food and construction industries.

## Foreign Trade

*"The value of foreign trade in 2021 (Jan.-Oct.) increased compared to the same period of 2020 (Jan.-Oct). This was supported by a continually recovering global trade climate. In addition to the situation of COVID-19 pandemic in many countries around the world began to unfold in a better direction. As a result, trade between Thailand and main trading partners can continue to increase."*

Thailand's foreign trade in 2021 (Jan. – Oct.) reached a total value of 443,456.0 million USD. The export value increased by 15.7 percent to a total value of 222,736.4 million USD compared to last year. Import value increased 31.3 percent a total value of 221,089.8 million USD compared to last year. However, the trade balance is still in a surplus of 24,755.5 million USD in 2021 (Jan. – Oct.).

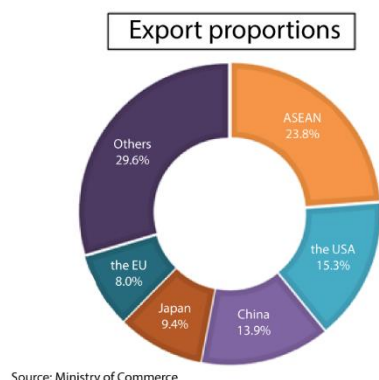
### Export Structure



Thailand's exports in 2021 (Jan. – Oct.) increased by 15.7 percent compared to the same period last year to 222,736.4 million USD. The main product categories have changed as follows: agricultural products reached 21,723.9 million USD, an increase of 24.5 percent; agro-industrial products increased by 3.8 percent to 15,822.6 million USD; industrial products increased by 14.5 percent to 176,863.3 million USD; mineral ore and fuel products increased by 53.2 percent to 8,326.5 million USD.

Industrial products with an increase in exports were automobiles, accessories and parts (with the export value of 23,696.9 million USD, increasing 38.4 percent), computer, accessories and parts (with the export value of 17,909.6 million USD, increasing 16.7 percent), rubber products (with the export value of 12,187.6 million, increasing 24.2 percent), plastic beads (with an export value of 9,306.3 million USD, increasing 42.9 percent) and chemical products (with the export value of 7,988.5 million USD, increasing 44.6 percent).

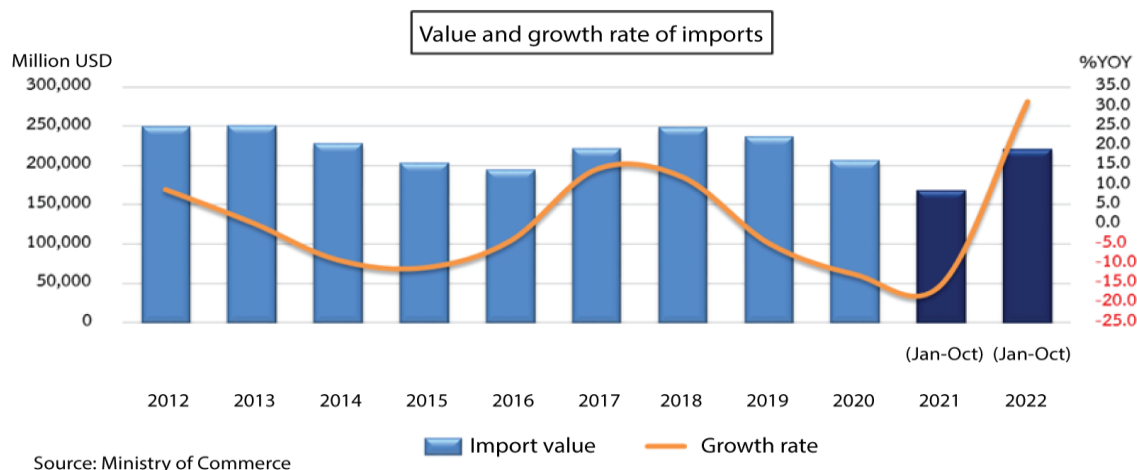
## Export Markets



In 2021 (Jan.-Oct.) exports of Thailand's main trading partners increased in all markets, including ASEAN (9 countries), the United States of America, China, Japan and the EU (27 countries). Exports to 5 markets are ASEAN (9 countries), the United States of America, China, Japan and the EU (27 countries) total 70.4 percent and exports to other markets accounting for 29.6 percent of total exports with details as follows:

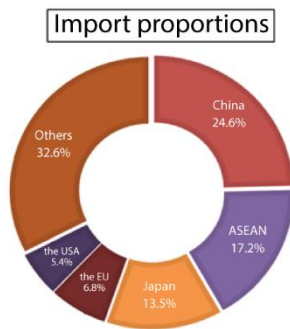
- Thailand exported products to ASEAN (9 countries), the United States of America, China, Japan and the EU (27 countries), which accounted for 23.8 percent, 15.3 percent, 13.9 percent, 9.4 percent and 8.0 percent, respectively.
- The export growth rate, compared with the same period last year, Thailand's main trading partners expanded in all markets. China was the highest which grew by 26.1 percent, next, the EU grew by 22.1 percent, the United States of America grew by 20.1 percent, ASEAN (9 countries) grew by 15.1 percent and Japan grew by 11.8 percent.

## Import Structure



Import value in 2021 (Jan. – Oct.) an increase by 31.3 percent compared to the same period last year to 221,089.8 million USD, the main product categories have changed as follows: imports of fuel products increased by 43.3 percent to 32,718.9 million USD. Capital goods increased by 19.9 percent to 54,302.1 million USD. Raw materials and semi-finished products increased by 41.6 percent to 96,196.8 million USD. Consumer goods increased by 21.2 percent to 25,451.3 million USD. Vehicles and transport equipment increased by 30.3 percent to 12,113.0 million USD. Weaponry, military supplies and other products decreased by 84.9 percent to 307.8 million USD.

## Source of Imports



Source: Ministry of Commerce

In 2021 (Jan.-Oct.), China, ASEAN (9 countries), Japan and the EU (27 nations) were Thailand's top import markets. The only market where imports declined was the United States of America. Imports from foreign markets accounted for 67.6 percent of total imports and imports from other markets accounted for 32.6 percent of total imports. with the following information:

- Thailand imported products from China, ASEAN (9 countries), Japan, the EU (27 countries) and the United States of America, which accounted for 24.6 percent, 17.2 percent, 13.5 percent, 6.8 percent and 5.4 percent respectively.
- The growth rate of the import value compared to the same period of the previous year expanding in China grew by 35.2 percent, Japan grew by 34.9 percent, ASEAN (9 countries) grew by 19.3 percent and the EU (27 countries) grew by 17.7 percent, while the United States of America market contracted by 8.0 percent

## The World Economy in 2021

*“The global economy tends to recover continuously. This was reflected in the increased production and trade sectors. The inflation rate has an upward trend. The unemployment rate dropped while interest rates are stable.”*

Summary of Key Countries' Economic Indicators in 2021

	Growth (%YoY)						
	GDP 2021 <sup>F</sup>	Inflation 2021 <sup>F</sup>	MPI (JAN-OCT)	Export (JAN-OCT)	Import (JAN-OCT)	Unemp. Rate <sup>F</sup>	Policy Rate <sup>F</sup>
the USA	↑ 6.0	↑ 5.1	↑ 7.2	↑ 23.4	↑ 21.4	At 5.4	At 0.00-0.25
China	↑ 8.0	↑ 2.0	↑ 9.3 <sup>a</sup>	↑ 32.0	↑ 31.0	At 3.8	At 4.35
Japan	↑ 2.4	↑ 0.7	↑ 7.5 <sup>a</sup>	↑ 20.1	↑ 18.6	At 2.8	At -0.10
South Korea	↑ 4.3	↑ 2.7	↑ 7.4 <sup>a</sup>	↑ 26.0	↑ 29.6	At 3.8	At 0.75
Singapore	↑ 6.0	↑ 1.3	↑ 11.9 <sup>a</sup>	↑ 21.0	↑ 21.7	At 2.7	At 0.67
Thailand	↑ 1.0	↑ 1.0	↑ 5.9	↑ 15.6	↑ 31.3	At 1.5	At 0.50

Source: Gathered from [www.ceicdata.com](http://www.ceicdata.com), [www.imf.org](http://www.imf.org), [www.oie.go.th](http://www.oie.go.th), [www.nesdc.go.th](http://www.nesdc.go.th)

Note: F are the forecasted figures from IMF, a is average 9 months (Jan-Sep).

The IMF predicts that global economic growth expanded by 6.0 percent in 2021 compared to last year. Production and trade both increased following a recovery in consumer demand as a result of the COVID-19 outbreak lessening. As a result, production and trade grew accordingly. In addition, the expansion base of the previous year was at a low level. As for inflation, there was a tendency to increase. The unemployment rate declined compared to the previous year. As for the policy interest rate, at the end of 2021, Federal Reserve Bank announced at 0.00-0.25 percent and it is expected to remain stable throughout the year same as many other major economies, to help boost trade, investment and promote domestic economic recovery.

The current state of crude oil prices on the global market is higher. Following the return to normalcy of oil demand in the production sector, numerous activities resumed. Furthermore, many countries began storing oil for use in the winter while OPEC Plus members continued to steadily boost production capacity, oil prices in the global market rose to a greater level. Dubai crude oil prices 2021 (Jan.-Oct.) were 68.0 USD/barrel, expanded when compare with 2020 which averaged at 41.3 USD/barrel. In October 2021 averaged at 81.7 USD/barrel. In October 2021, the NYMEX crude oil price was 81.1 USD/barrel.

Furthermore, there are still difficulties that need to be monitored in the global economy, such as the possibility that the globe will have to face the COVID-19 pandemic again (Omicron). Prices of energy and raw materials are on the rise. This will have an impact on production and transportation costs, with container shortages and increased freight rates among the consequences. All of these are issues that will put a stress in the economic in the future. However, under the policy of opening the country and economic recovery measures in each country, as well as advancements in vaccine distribution and medicine development, the ongoing pandemic can be halted. It is an element that contributes to the continuation of economic activity.

## Part 2: Sectoral Industrial Economic Conditions of Thailand in 2021 and Outlook for 2022

## Iron and Steel Industry

The MPI of the iron and steel manufacturing industry in 2021\* increased compared to 2020, increasing in both long-formed and flat-formed steel products. Long-formed steel products that increased included hot-rolled structural steel, wire rod and steel wire. Flat-formed steel products that increased included cold-rolled steel sheets and galvanized steel sheets.

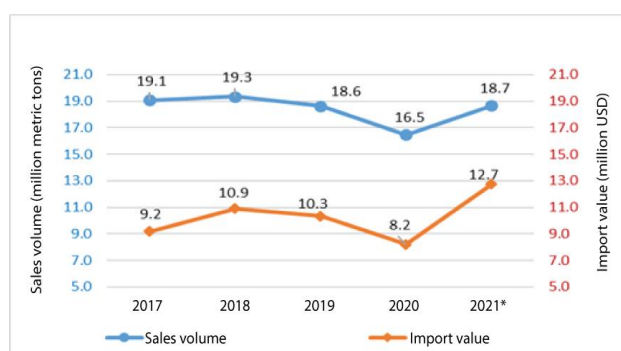
### Manufacturing Production Index (MPI)



Source: The Office of Industrial Economics

\* Estimation in 2021 by the Office of Industrial Economics.

### Sales volume - Import value



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

\* Estimation in 2021 by the Office of Industrial Economics and Iron and Steel Institute of Thailand.

**The MPI** in 2021\* is expected to increase compared to the previous year. The MPI was 102.5, increasing by 14.8 percent (%YoY). Products in the long steel group increased, such as hot-rolled structural steel, wire rods and steel wires, primarily from large government infrastructure construction projects. Products in the flat steel group increased, such as cold-rolled steel and galvanized steel sheet, primarily from continuous industries like the automotive industry.

**Domestic sales** in 2021\* are expected to reach 18.7

million metric tons, an increase of 13.4 percent (%YoY) for both long and flat products. Long products that increased in sales included wire rods, rebars and hot-rolled structural steel sections which are used to produce nails, gratings, nuts, screws, welding wires, tires and reinforcement wire. Flat products that increased in sales included cold-rolled thin steel and hot-rolled thin steel which is used in continuous industries such as the construction industry, automotive and electrical appliances.

**Imports** in 2021\* are expected to value 12.7 billion USD, increasing by 55.2 percent (%YoY), increasing in both long-formed and flat-formed steel products. Long-formed steel products that increased in import value included steel bars used in continuous industries such as the automotive industry, wire rods and steel wire. Flat-formed steel products with an increased import value included hot rolled steel sheets and cold rolled steel which is used in continuous industry.

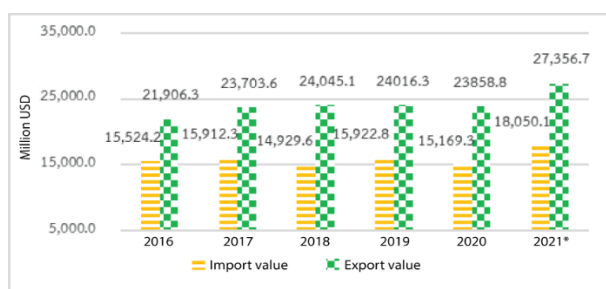
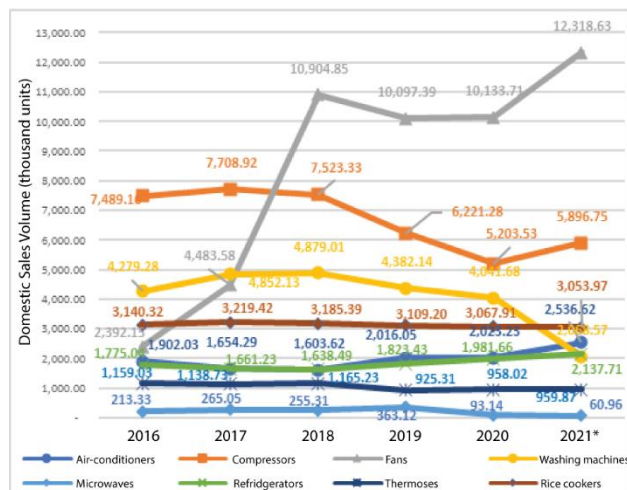
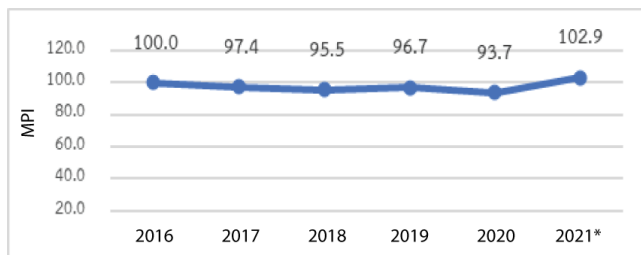
### 2022 Outlook for Iron and Steel Industry

*Production in the steel industry in 2022 is expected to increase slightly at 0.4 percent compared to the same period of the previous year. Steel consumption in 2022 is expected to reach 19.6 million tons, an increase of 5.0 percent, supported by the expansion of downstream industries such as the construction industry, especially government infrastructure construction projects and promoting the domestic industry. This is expected to increase the volume of production and consumption of steel products in the country. There are important issues to be monitored such as the global economic and trade situation and China's decreased production along with energy and transportation costs affecting steel prices.*

## Electrical Appliance Industry

Production of electrical appliances in 2021\* compared to 2020 increased by 9.9 percent from electrical wires, compressors, air conditioners, microwave ovens, washing machines, refrigerators and fans. Following the outbreak of the COVID-19, the global economy began to recover. As a result, there is a growing demand for electrical appliances, particularly new electrical appliances that place a premium on health, as well as the distribution of items through online channels, which makes it easier for customers to obtain information and make purchasing decisions.

### MPI, Import and Export Value of Electrical Appliances



Source: Production information—The Office of Industrial Economics

Import/export information—Electrical and Electronics Institute

\*Outlook for 2021 and 2022 by the Office of Industrial Economics and Electrical and Electronics Institute.

*Production of electrical appliances* in 2021\* was expanded compared to the previous year. The MPI was 102.9 points, increased by 9.9 percent (%YoY). Electrical appliances that increased included electric cables (21.04 percent), compressors (18.0 percent), air conditioners (10.4 percent), microwave ovens (6.9 percent), washing machines (6.8 percent), refrigerators (4.8 percent) and fans (2.2 percent) respectively. The electric cables have more orders from abroad especially the United States of America, ASEAN and the EU markets. The products that have declined are electric motors, rice cookers and kettles decreased by 17.2 percent, 4.5 percent and 2.9 percent respectively. This is due to domestic sales and foreign orders declining in China, ASEAN and Japan.

*Domestic sales* in 2021\* products sold in the country decreased compared to the previous year. Washing machines, microwave ovens and rice cookers all decreased by 48.8 percent, 34.5 percent and 0.5 percent respectively, while air conditioners, fans, compressors, refrigerators and thermos all increased by 25.4 percent, 21.6 percent, 13.3 percent, 7.9 percent and 0.2 percent, respectively.

*Imports of electrical appliances* in 2021\* were valued at 18,050.1 million USD increasing from the previous year by 18.9 percent (%YoY) due to an increase in imports from main markets such as China, Japan and ASEAN from imports of fans, refrigerators, electric motors and washing machines.

*Exports of electrical appliances* in 2021\* were valued at 27,356.7 million USD increasing from the previous year by 14.7 percent (%YoY) from exports to ASEAN, the EU and the United States of America markets increased, such as electric cables, rice cookers, transformers, compressors, electric motors, air conditioners, washing machine and refrigerator.

### 2022 Outlook for Electrical Appliance Industry

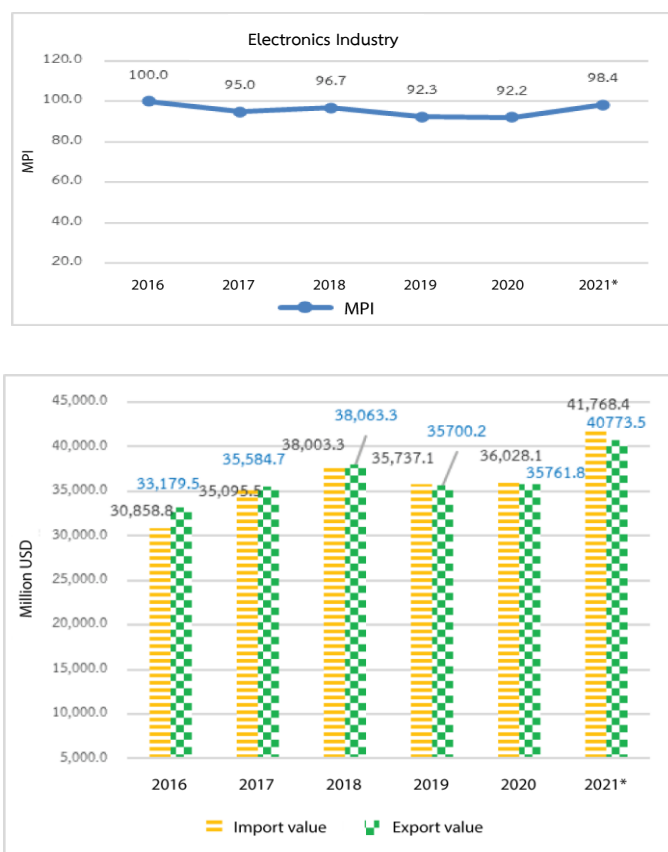
It is expected that production and exports will increase by about 3.0 percent and 5.0 percent respectively, compared to the previous year. The global economy and Thailand main export markets are recovering from the COVID-19 outbreak and innovation, modern technology advancements, particularly in electrical appliances that focus on health, such as air cooling fans, air purifiers and air fryers, as well as selling products through online channels, make it easier for consumers to access information and make purchasing decisions. As a result, in 2022, the demand for electrical appliances is expected to continue to rise.



## Electronics Industry

The production of electronic products in 2021\* increased by 6.7 percent compared to 2020. An increase in products are printers, PCBA, semiconductor devices, transistors, IC and HDD products is a result of increased global demand for electronic products to support Cloud Computing and Data Center, as well as the need for equipment to work and study over long distances. This has increased export value in key markets such as ASEAN, the EU, the United States of America and China.

### MPI, Import and Export Value of Electronic



Source: Production information—The Office of Industrial Economics

Import/export information—Electrical and Electronics Institute

\*Outlook for 2021 and 2022 by the Office of Industrial Economics and Electrical and Electronics Institute.

**Production of electronics** in 2021\* the MPI was 98.4 expanded from last year by 6.7 percent (% YoY). The electronic products that have been increasing are: Printers, PCBA, semiconductor devices transistors, IC and HDD increased by 19.7 percent, 14.5 percent, 12.7 percent, 12.0 percent and 6.7 percent respectively when compare to the previous year, due to the growing demand for electronic products around the world, including the IoT, 5G with rapid development technology.

**Exports of electronics** in 2021\* were valued at 40,773.5 million USD expanded from last year by 14.0 percent (%YoY), Markets in ASEAN, the EU, the United States of America and China are all growing. Printers, photocopiers and components, as well as printed circuits, integrated circuits, diodes, transistors, semiconductors and components, climbed by 33.3, 30.4, 16.0 and 8.9 percent, respectively. Due to the global economic recovery following the COVID-19 outbreak, the advancement of advanced technology and the growing demand for semiconductor parts in the manufacture of modern products both domestically and internationally, particularly IoT products such as smart products in the electrical appliance and automotive industries.

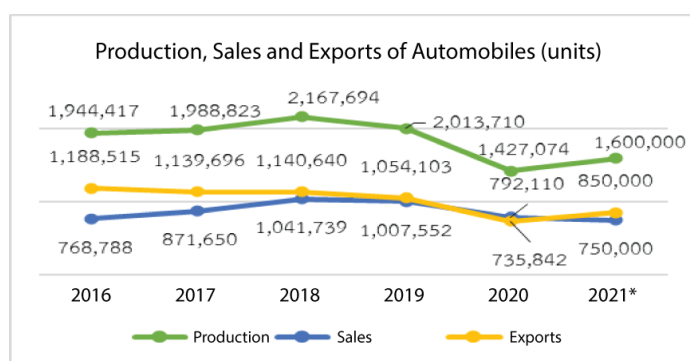
**Imports of electronics** in 2021\* were valued at 41,768.4 million USD expanded from last year by 15.9 percent (%YoY). The main markets are China, Japan, the EU, ASEAN and the United States of America as these countries imported more monitors and computer components.

### 2022 Outlook for Electronics Industry

In 2022, the electronics industry is expected to grow by 5.0 percent in terms of output and 8.0 percent in terms of exports respectively compared to the previous year because of the global economy recovery from the COVID-19 outbreak and semiconductor product manufacturer adjustment to the chip scarcity scenario. As a result, there is a continuing demand for electronic items, including the creation and upgrading of 5G technology network systems. The Data Center increases demand for electronic products both domestically and internationally.

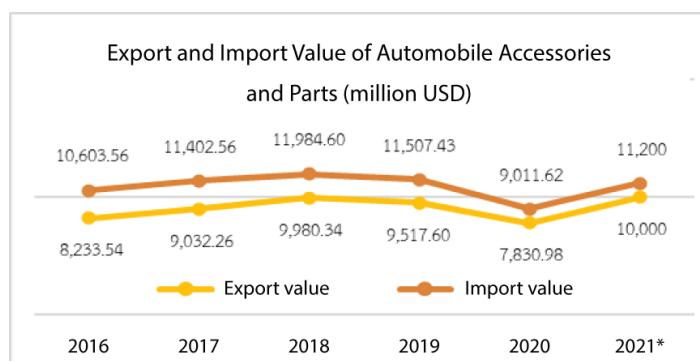
## Automobile and Parts Industry

The automobile industry in 2021 is expected to expand production compared to the same period of the previous year, increased in the export market. as the economic activities of the trading partners expanded due to the relief of the COVID-19 situation. The domestic market is still slowing down. However, the situation with the COVID-19 outbreak must be closely monitored. This will have an impact on the ease with which pandemic control measures are relaxed, as well as the automobile industry.



Source: The 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.



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.

### Production of Automobiles

In 2021, automobile manufacturing is predicted to reach 1,600,000 units compared to the same period last year, which have volume at 1,427,074 units, increased by 12.12 percent which was divided into passenger cars accounting for 42 percent, 1-ton pickup trucks and derivatives for 56 percent and other commercial vehicles accounting for 2 percent.

### Domestic Sales of Automobiles

In 2021, domestic automobile sales are expected to reach 750,000 units compared to the same period last year. The sales volume was 792,110 units, a decrease of 5.32 percent, which was divided into 40 percent of passenger cars, 41 percent of 1-ton pickup trucks, 14 percent of PPVs and SUVs and 5 percent of other commercial vehicles.

### Exports of Automobiles

In 2021, exports of automobile CBU are expected to reach 850,000 units compared to the same period last year, which the export volume was 735,842 units, an increase of 15.51 percent.

### Export Value of Automobile Accessories and Parts

The export value of automotive accessories and parts in 2021 is expected to be 10,000 million USD compared to the same period last year, which was valued at 7,830.98 million USD increasing by 27.70 percent. Major export markets of automobile parts and accessories are the United States of America, Japan and Malaysia.

### Import Value of Automobile Accessories and Parts

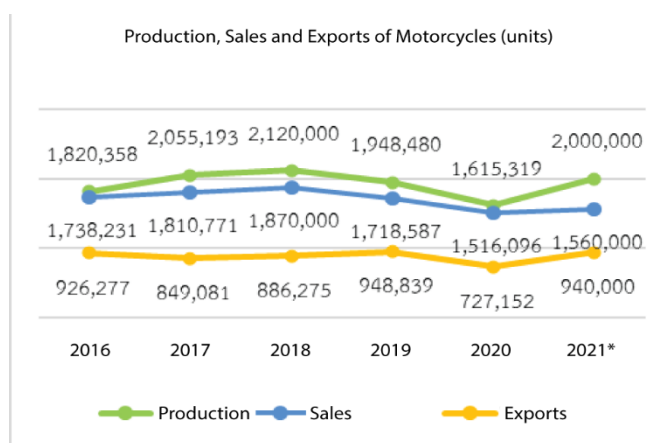
The export value of automotive accessories and parts in 2021 is expected to be 11,200 million USD compared to the same period last year, which was valued at 9,011.62 million USD increasing by 24.28 percent. Major import markets of automobile parts and accessories are Japan, China and the United States of America.

## 2022 Outlook for the Automobile Industry

The Office of Industrial Economics expects that automobile production will reach approximately 1,700,000 units, increasing by 6.25 percent from the same period last year. Approximately 45-50 percent of the production is expected to be sold domestically and 50-55 percent for export.

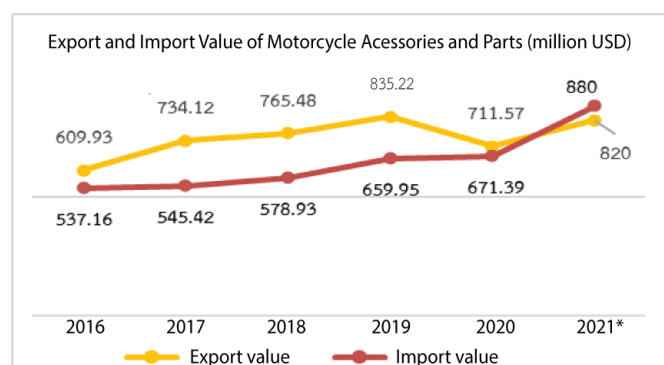
## Motorcycle and Parts Industry

The motorcycle industry is predicted to grow in 2021 compared to the same period last year due to local market demand and export market, as well as relief from the COVID-19 pandemic. However, the situation of the COVID-19 pandemic must still be monitored. This will have an impact on the ease with which pandemic control measures are relaxed, as well as the motorcycling industry.



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

\* Forecasted by the Office of Industrial Economics.



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

\* Forecasted by the Office of Industrial Economics.

### Production of Motorcycles

In 2021, the production of motorcycles is expected to reach 2,000,000 units compared to the same period last year which produced 1,615,319 units, an increase of 23.81 percent.

### Domestic Sales of Motorcycles

In 2021, domestic motorcycle sales are expected to reach 1,560,000 units compared to the same period last year, which sold 1,516,096 units, an increase of 2.90 percent.

### Exports of Motorcycles (CBU&CKD)

In 2021, it is expected that the number of motorcycle exports (CBU&CKD) of Thailand is 940,000 units (it is an exported 440,000 units of CBU and 500,000 sets of CKD) compared to the same period last year, in which 727,152 units were exported (319,038 units of CBU and 408,114 sets of CKD), an increase of 29.27 percent.

### Export Value of Motorcycle Parts

In 2021, the export value of motorcycle components is 820 million USD compared to the same period last year, which was valued at 711.57 million USD increasing by 15.24 percent. The main export markets are Japan, Cambodia and Brazil.

### Import Value of Motorcycle and Bicycle Accessories and Parts

In 2021, it is estimated that the import value of motorcycle and bicycle components and accessories is 880 million USD compared to the same period last year, the valued was 671.39 million USD increasing by 31.07 percent. The main import markets were Japan, the United States and China.

## 2022 Outlook for the Motorcycle Industry

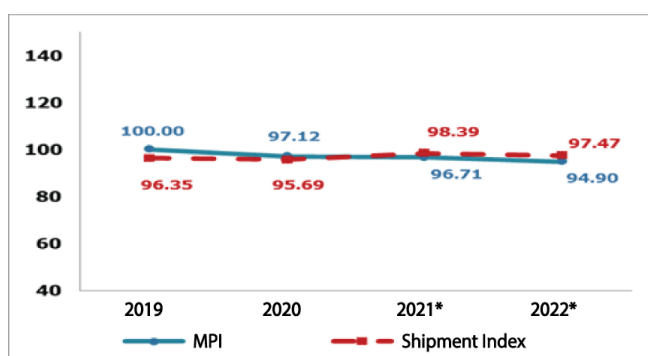
The Office of Industrial Economics estimates that production will be stable; the production volume is projected to reach approximately 2,000,000 units, whereby 85-90 percent of production will be for domestic sales and 10-15 percent for exports.

## Chemical Industry

In comparison to 2020, the chemical sector is predicted decreased by 0.42 percent in 2021. Exports are predicted to increase by 25.66 percent as the COVID-19 pandemic scenario begins to improve and the pandemic declines. The worldwide economic recovery aided the export of oil-related goods, causing the chemical industry to grow in comparison to the previous year.

### Production and sales

#### MPI and Shipment Index

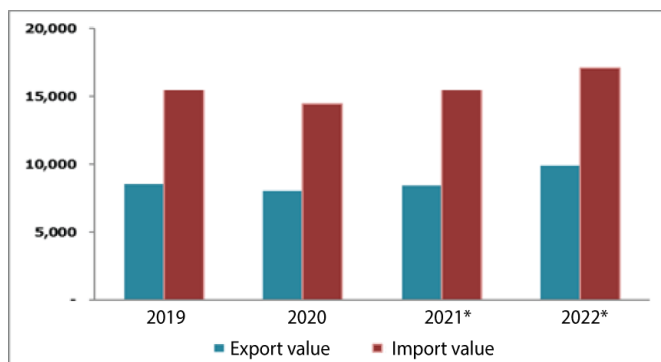


Source: The Office of Industrial Economics \*the year 2021 and 2022 are forecast numbers.

The MPI in 2021 is expected to decreased by 0.42 percent compared to 2020. Products that contributed to the decreased of the MPI include ethanol that decreased by 21.91 percent, dishwashing liquid that decreased by 15.94 percent and soap and skincare products that decreased by 12.10 percent.

The Shipment Index in 2021 is expected to increased by 2.82 percent compared to 2020. Products that contributed to the largest expansion was talcum powder that increased by 57.37 percent, sodium hydroxide increased by 39.37 percent and chemical fertilizers increased by 37.64 percent.

#### Export/Import Value (million USD)



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

\*the year 2021 and 2022 are forecast numbers.

**Exports of chemical products** in 2021 are expected to be valued at 10,107.02 million USD increased by 25.66 percent compared to 2020. Products with an expansion in export value are fertilizers that increased by 63.34 percent, organic chemicals that increased by 52.92 percent and miscellaneous chemicals that increased by 31.12 percent.

**Imports of chemical products** in 2021 are expected to be valued at 17,877.99 million USD increased by 23.90 percent compared to 2020. Products with the highest import value were fertilizers increased by 58.01 percent, miscellaneous chemicals increased by 51.57 percent and inorganic chemicals increasing by 38.38 percent.

### 2022 Outlook for the Chemical Industry

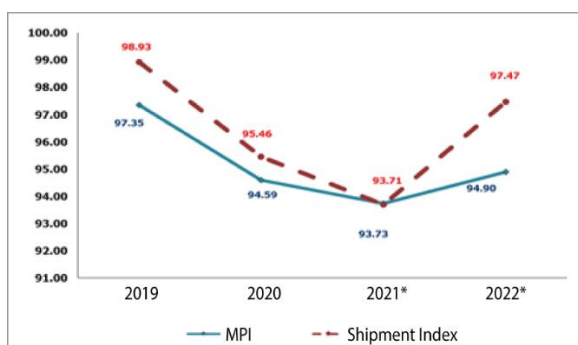
Due to the easing of measures imposed in several countries following the outbreak of the COVID-19, exports of the chemical industry are likely to improve in 2022. As the situation worsened, the number of those who had been vaccinated increased. As a result, economic activity consumption and export have a propensity to rise, causing linked chemical exports to increased compare to the previous year.

## Plastics Industry

Overall plastics industry in 2021 is expected to decreased by 0.91 percent compared to 2020, with exports expected to increased by 12.14 percent and imports will expand by 16.66 percent due to the recovery of Global economy after the pandemic of COVID-19.

### Production and sales

MPI and Shipment Index

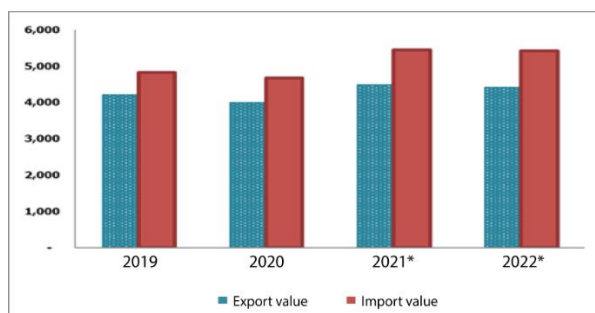


Source: The Office of Industrial Economics \*the year 2021 and 2022 are forecast numbers.

The MPI in 2021 is expected to decreased by 0.91 percent compared to 2020. Products causing the MPI to decreased such as plastic pipes and fittings that decreased by 5.99 percent, plastic sacks decreased by 4.16 percent and plastic bags decreased by 4.15 percent.

The shipment index in 2021 is expected to decreased by 1.84 percent compared to 2020. Products that contributed to the largest decreased were plastic pipes and fittings that decreased by 7.40 percent, plastic sacks that decreased by 5.53 percent and plastic bags that decreased by 3.07 percent.

Export/Import Value (million USD)



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

\*the Year 2021 and 2022 are forecast numbers.

Exports of plastic products in 2021 are expected to be valued at 4,477.09 million USD increased by 12.14 percent compared to 2020. Products with an expansion in export value are sanitary ware (HS 3922) that increased by 24.17 percent, tubes or pipes (HS 3917) that increased by 21.70 percent and self-adhesive sheets, thin sheets, films, foils and other strips (HS 3919) that increased by 16.60 percent.

Imports of plastic products in 2021 are expected to be valued at 5,447.94 million USD increased by 16.66 percent compared to 2020, products with an increased import value were monofilament increased by 35.31 percent, sanitary ware (HS 3922) increased by 24.37 percent and tubes or pipes (HS 3917) increased by 23.08 percent.

### 2022 Outlook for the Plastics Industry

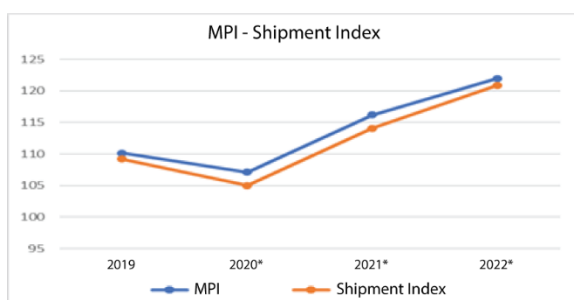
The plastics industry's MPI is predicted to rise by 1-2 percent by 2022. Due to the pandemic situation of the COVID-19, plastic product exports are predicted to increased by 2-3 percent compared to 2021. The global economy is recuperating from the relaxation of the lockdown and vaccine progress is being planned more explicitly, which is having a good impact on economic activity. Consumer confidence has boosted the overall economy, therefore private investment is expected to continue to recover.

## Petrochemical Industry

The MPI for the overall petrochemical industry is expected to increase by 8.45 percent in 2021 compared to 2020, with exports expected to increase by 42.98 percent and imports expected to increase by 42.91 percent. The global economy has begun to recover from the COVID-19 outbreak decrease, have increased vaccination around the world and the execution of economic stimulus measures by many countries, causing consumption to expand following the lockdown's disruption.

### Production and sales

#### MPI and Shipment Index



Source: The Office of Industrial Economics \*the year 2021 and 2022 are forecast numbers.

The MPI in 2021 is expected to increase by 8.45 percent compared to 2020. Upstream and downstream petrochemical products that contributed to the increase of MPI are Ethylene that increased by 14.00 percent and Polypropylene that increased by 7.60 percent.

The shipment index in 2021, is expected to increase by 8.62 percent compared to 2020. Propylene, which climbed by 20.14 percent and Polyethylene, which increased by 6.70 percent, were the upstream and downstream petrochemical products that contributed to the increase in the shipment index.

#### Export/Import Value (million USD)



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

\*the year 2021 and 2022 are forecast numbers.

Petrochemical product exports in 2021, are expected to be valued at 13,876.87 million USD increasing by 42.98 percent when compared to 2020. Upstream and downstream petrochemical products with an expansion in export value are Ethylene which increased by 20.52 percent and PP resin that increased by 35.66 percent.

Petrochemical imports in 2021, are expected to be valued at 6,827.37 million USD increasing by 42.91 percent when compared to 2020. Upstream and downstream petrochemical products with the import value expanding are Propylene which increased by 33.76 percent and PP resin that increased by 54.28 percent.

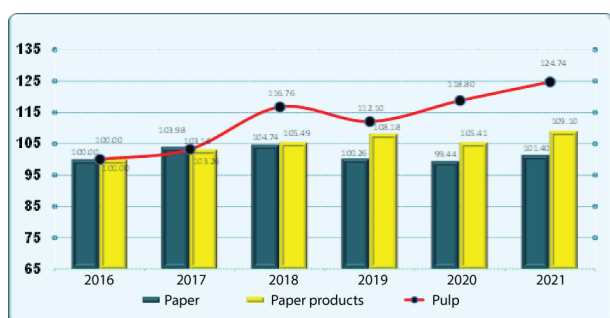
### 2022 Outlook for the Petrochemical Industry

The petrochemical industry's MPI is predicted to increase by 5-10 percent by 2022. In comparison to 2021, petrochemical exports are predicted to increase by 10-15 percent. The government's investment promotion program is predicted to boost the petrochemical industry outlook in 2022. Although several nations economies have been stimulated and foreign production has returned, there are still elements that will influence the petrochemical industry progress, such as the trend of oil prices and the direction of the Thai baht changes.

## Pulp, Paper and Print Media Industry

The COVID-19 pandemic will benefit the pulp, paper and print media industries in 2021. As a result, consumer habits have shifted. During the COVID-19 outbreak, online shopping, food delivery in the form of ready-to-eat food and the expansion of medical supplies and equipment were all used. The paper and goods business is expanding across the entire supply chain.

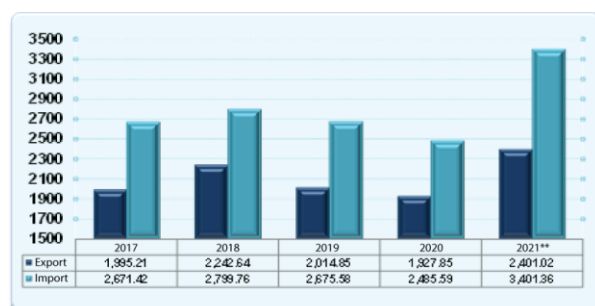
MPI in Pulp, Paper and Print Media Industry



Source: The Office of Industrial Economics

Note: Information for the year 2021 was estimated by the Office of Industrial Economics.

Export-Import of Pulp, Paper and Print Media



Source: Ministry of Commerce

Note: Information for the year 2021 was estimated by the Office of Industrial Economics.

*Production of pulp and paper and products* in 2021, the MPI is projected to rise throughout the manufacturing process. The pulp group, the paper group and the packaging group all increased by 3.57 percent, 4.07 percent and 0.62 percent, respectively, compared to the previous year (%YOY). This is a domestic and worldwide order, particularly from China, where Thailand sells pulp in large quantities, accounting for 90 percent of all pulp exports. The COVID-19 outbreak benefits paper and paper packaging. As a result, consumer habits have shifted. During the outbreak, online shopping, food delivery in the form of ready-to-eat meals and the expansion of medical supplies and equipment all increased and these trends are projected to continue until the end of the year.

*Exports of pulp, paper and print media* in 2021 are expected to reach an export value of 2,401.02 million USD, an increase of 24.54 percent (%YOY). Increase in the pulp group, paper products, books and publications, particularly the pulp, where exports to China and France increased by 205.84 percent. Exports of paper and paper products are predicted to expand by 3.51 percent, with Vietnam, Malaysia and China as the primary export markets.

*Imports of pulp, paper and print media* in 2021 are expected to reach an export value of 3,401.36 million USD, an increase of 36.84 percent (%YOY). Imports increased by 122.31 percent, 13.48 percent, 20.16 percent and 3.27 percent in all product groups, including pulp and waste paper, paper and products, paper products and publications, respectively, especially in the paper or pasteboard group that was reused according to demand for use in countries with relatively high imports.

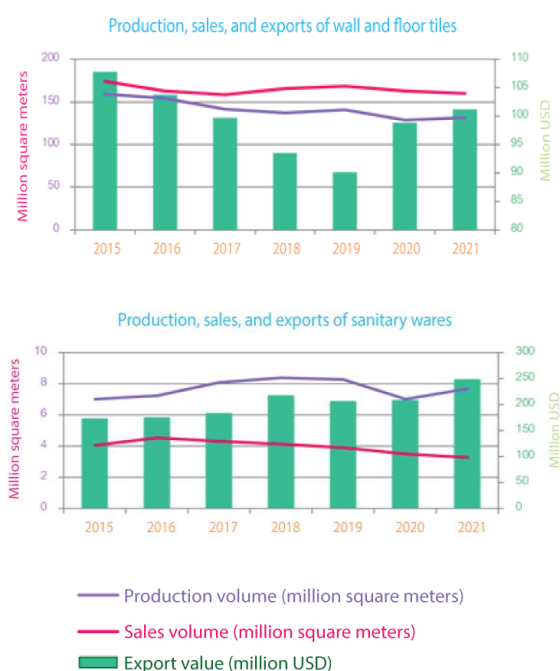
**2022 Outlook for the Pulp, Paper and Print Materials Industry** production of pulp and paper products is expected to increase steadily from 2021, with the exception of printing and writing paper, which will continue to decline as the popularity of print media declines. As for the pulp group's exports, it remains in high demand from major importers such as China, with orders coming in on a regular basis. In terms of domestic consumption, it is projected that following the COVID-19 pandemic, consumer behavior would shift to online purchasing and the food industry in the form of ready-to-eat food will expand tremendously. As a result, the opportunity for paper packaging for food packaging and transportation expands.



## Ceramics Industry

In 2021, the volume of production and exports grew compared to the previous year, reflecting the expansion of key export markets such as the CLMV countries, the United States of America, Japan and China. For the ceramics industry trends in 2022, it is projected that the production and distribution of ceramics will be a propensity to develop more according to the needs of domestic consumers due to the lockdown measures during the pandemic situation of the COVID-19.

### Production, Sales and Exports of Ceramics



Source: 1. Production volume and domestic sales (estimated figures)—Division of Information and Industrial Economic Indices, the 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 the Office of Industrial Economics

**Production** in 2021, floor and wall tiles production reached 131.57 million square meters, a 2.39 percent increase from the previous year (%YoY). The production volume of sanitary ware were 7.69 million units, a 9.44 percent increase from the previous year (%YoY) to support the expansion of main export markets such as CLMV countries.

**Sales** in 2021, the sales volume of floor and wall tiles reached a sales volume of 159.62 million square meters, a decrease of 2.02 percent from the previous year (%YoY). The sales volume of sanitary ware reached 3.27 million units, a decrease of 6.96 percent from the previous year (%YoY) from economic conditions and the announcement of lockdown measures during the pandemic situation of the COVID-19.

**Exports** in 2021, exports of wall and floor tiles increased by 2.34 percent from the previous year (%YoY) to a value of 101.12 million USD. Sanitary ware, valued at 247.72 million USD also increased by 19.17 percent (%YoY) from the previous year due to the increase in orders from CLMV, the United States of America, Japan and China after the COVID-19 pandemic situation eased.

### 2022 Outlook for the Ceramics Industry

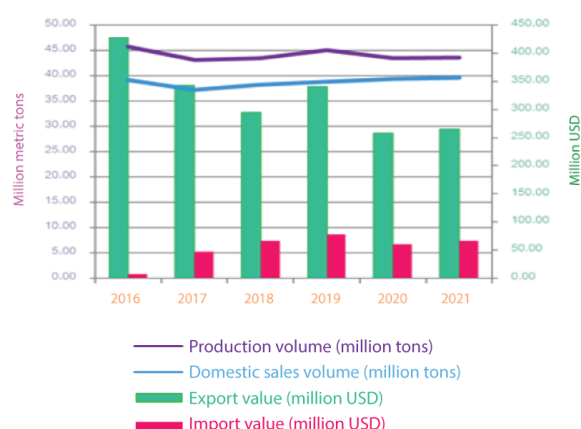
Domestic production and sales of ceramics in 2022 is expected that there will be an increasing trend from the needs of domestic consumers after the situation of the COVID-19 pandemic has eased, including the issuance of government economic stimulus measures but there are still important factors that may affect the expansion, including the government's control and prevention of pandemic. Domestic retail oil prices and the global economic situation. Overall, ceramic product exports are expected to shrink slightly according to the economic conditions of the export market that are still affected by the pandemic situation of the COVID-19 but if the situation returns to normal exports may expand in the last 6 months of 2022, with the main markets for ceramic product exports still being Japan, the United States of America, China and the CLMV countries.



## Cement Industry

In comparison to the previous year, the cement industry is expected to grow in 2021. The volume of production increased somewhat. Positive factors, such as the acceleration of government infrastructure construction, increased sales volume. Large amounts of orders returned from Bangladesh increased the export value. Imports of high-quality cement increased the import value.

### 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, the 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 the Office of Industrial Economics

**Cement production** (excluding clinker) in 2021, the production volume was 43.60 million tons, slightly expanding from the previous year by 0.34 percent (%YoY).

**Domestic sales of cement** (excluding clinker) in 2021, the volume was 39.58 million tons, a slight increase by 0.34 percent from the previous year (%YoY), with positive factors from the government's acceleration in infrastructure construction and large-scale projects of the government in different areas.

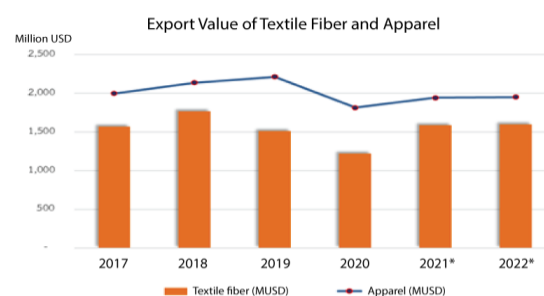
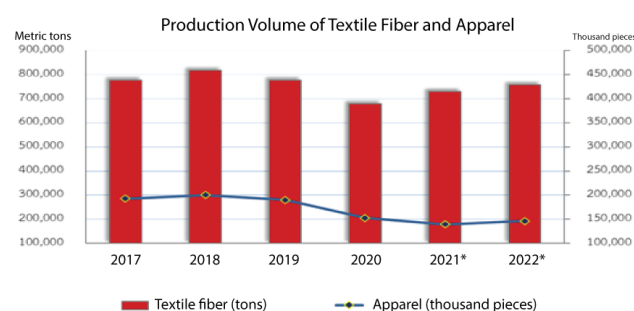
**Cement exports/imports** (excluding clinker) in 2021, exports were valued at 264.89 million USD, an increase of 2.65 percent from the previous year (%YoY) as a result of the Bangladesh market that has many return orders. The imports were valued at 65.87 million USD increasing by 9.54 percent from the previous year (%YoY) from the import of high-quality cement from the Netherlands.

### 2022 Outlook for the Cement Industry

In 2022, cement production (excluding clinker) is expected to increase primarily as a result of positive factors such as the government's acceleration of large-scale infrastructure projects, both existing and new projects and the economic recovery, which will gradually improve if the COVID-19 outbreak decreases significantly and no other negative factors affect. In terms of shipments to the primary export market, it is envisaged that they would be able to expand again if the COVID-19 outbreak improves, particularly in CLMV nations, where governments are pursuing large-scale infrastructure projects. Exports have also increased as a result of new export markets.

## Textile and Apparel Industry

Textile fibers are predicted to expand in both the manufacturing and export sectors in 2021 to support rebounding exports, while fabrics and ready-made garments are expected to slow in the manufacturing sector. This is because domestic consumers' purchasing power has slowed dramatically, particularly among the major tourists who have not returned, such as Chinese tourists. Despite the fact that the export sector is growing in key markets such as the United States, the United Kingdom and China.



Source: The Office of Industrial Economics and Ministry of Commerce

The year 2021 and 2022 are forecast numbers.

### Production

*Textile fiber* products in 2021 are expected to increase by 7.43 percent (%YoY) due to the low base in the previous year affected by the COVID-19 pandemic. In addition, there has been a recovery from key trading partner markets, especially the artificial fiber group, while the fabric group and ready-made garments decreased by 1.52 percent and 8.62 (% YoY) due to the slowdown in domestic consumption, despite the expansion of garment exports.

### Domestic Sales

*Textile fiber* groups in 2021 are expected to increase by 9.49 percent (%YoY) due to the demand for raw materials for export, while the fabric group and ready-made garments will decrease by 0.01 percent and 5.01 respectively, due to a significant slowdown in purchasing power, especially the main markets like China that has not returned yet.

### Exports

Textile and apparel exports are estimated to reach 6,381.93 million USD in 2021, an increase of 11.01 percent (%YoY). Textile fibers are predicted to be worth 1,587.34 million USD, representing a 29.90 percent rise in value. Ready-made clothing is valued at 1,942.27 million USD, up 7.04 percent from last year low base caused by the pandemic. In addition, the pandemic situation in important trading partners has been rectified. As a result, economic activity in key markets such as the United States of America, Hong Kong, Germany, the United Kingdom and Australia returned to normal and exports increased.

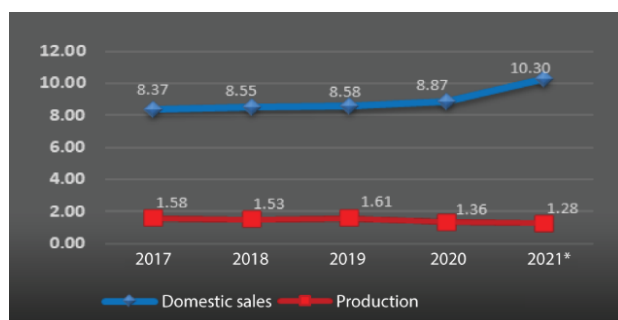
### 2022 Outlook for the Textiles and Apparel

Production, exports and domestic sales of textile fibers, fabrics and ready-made garments are expected to grow and purchasing power in the country should begin to recover from the country's opening, as well as to support demand from foreign countries that have been consistent throughout the supply chain, despite risk factors such as high freight costs and the impact of China's energy shortages. As a result, raw materials such as yarns and polyester fibers, as well as a new round of the pandemic, have escalated in price.

## Wood and Wooden Furniture Industry

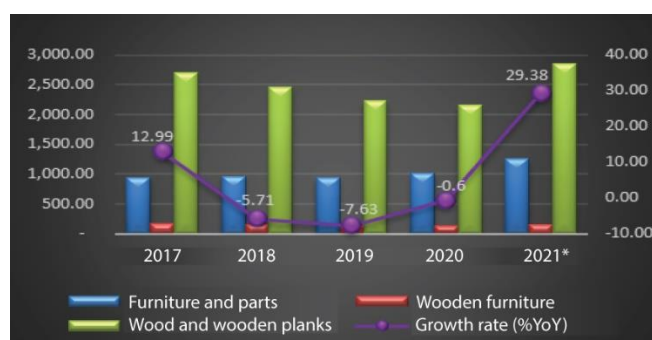
The production volume of wooden furniture in 2021 is likely to increase by 16.12 percent due to production in response to international market demand. Meanwhile, the domestic sales of wooden furniture is likely to decline by 5.88 percent due to the impact of the latest wave of the COVID-19 pandemic. The export value of wood and wood panel products is expected to increase by 29.38 percent due to the recovery of key export markets.

### Domestic Production and Sales of Wooden Furniture (million pieces)



Source: The 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 2021, the volume is expected to be 10.30 million pieces, an increase of 16.12 percent compared to the previous year, mainly because of the production to respond to the needs of the international market.

**Domestic sales of wooden furniture** in 2021, the volume is expected to be 1.28 million pieces, a decrease of 5.88 percent compared to the previous year. As a result of the spread of COVID-19, the latest wave occurred at the beginning of this year that led to a slowdown in the domestic economy and lower consumer purchasing power.

**Exports of wood and wooden products** in 2021 is expected to be valued at 4,262.71 million USD increasing by 29.38 percent compared to the previous year. Divided into wood and wooden planks products, it is expected to have an export value of 2849.77 million USD increasing by 32.58 percent compared to the previous year. Furniture and parts are expected to have an export value of 1,253.50 million USD increasing by 23.81 percent compared to the previous year. Wood products are expected to have an export value of 159.44 million USD increasing by 20.06 percent compared to the previous year. Overall, the export value of wood and wooden products increased in all product groups. Due to the low base of export last year and the recovery of key export markets such as the United States of America, China and Japan.

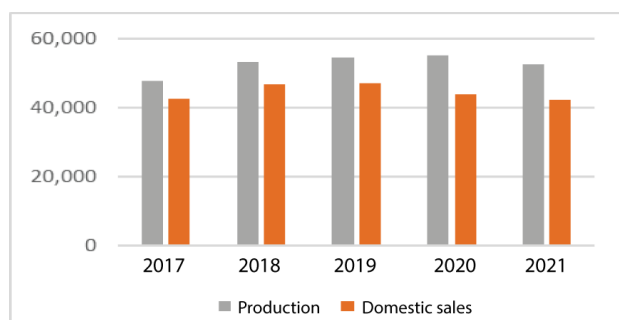
### 2022 Outlook for the Wood and Wooden Furniture Industry

The production of wooden furniture in 2022 is predicted to increase compared to last year from production to meet the needs of both domestic and international markets. Meanwhile, the domestic sales of wooden furniture are expected to increase compared to last year caused by the relaxation of measures to control the outbreak of COVID-19 and allowing foreign tourists to travel into the country. This will help restore the economy and increase the purchasing power of domestic consumers. The export value of wood and wooden products is expected to increase compared to the previous year from the global economy and the economy of countries that are important export markets that tend to recover continuously.

## Pharmaceutical Industry

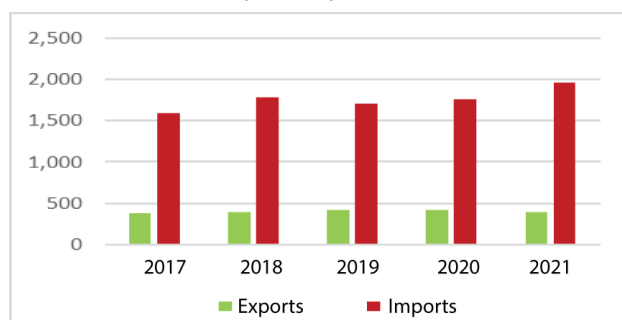
Production and domestic sales volumes in 2021 are expected to decrease from the previous year. According to the trend of demand that has decreased from the situation of the COVID-19 pandemic starting to unravel. As for pharmaceutical exports, it is expected to slow down as well. This was mainly a decline in pharmaceutical exports to the ASEAN market.

**Domestic Production and Sales (tons)**



Source: The Office of Industrial Economics

**Pharmaceuticals Import-Export Value (Million USD)**



Source: Ministry of Commerce

**Production** in 2021, pharmaceutical production is expected to reach a volume at 52,811.42 tons, a decrease by 4.56 percent from the previous year, by slowing down the production of pills, liquid medicine capsules, injectable drugs and powder medicines according to the declining orders of both domestic and international markets.

**Sales** in 2021, pharmaceutical sales are expected to reach 42,474.40 tons, decreasing by 3.72 percent, according to the needs of domestic use. Overall, the reduction was attributable to the COVID-19 pandemic situation beginning to unwind. As a result, hospitals are less likely to need to store drugs in anticipation of shortages, as many nations that previously suspended drug exports have resumed normal operations.

**Exports** in 2021, pharmaceuticals exports are expected to value at 395.45 million USD decreasing by 5.57 percent from the previous year. This was mainly a decrease in ASEAN markets, namely Myanmar, Vietnam, Cambodia, the Philippines and Singapore. As for pharmaceuticals imports, it is estimated to value at 1,971.39 million USD increasing by 11.97 percent from the previous year, with an increase in pharmaceutical imports from India, Japan and the United States of America. The value of pharmaceuticals imports from India increased by 99.75 percent, making Thai entrepreneurs unable to compete because India has much lower drug production costs compared to Thailand.

### 2022 Outlook for the Pharmaceutical Industry

The manufacture of pharmaceuticals in 2022 is expected to grow by 5.00 percent according to the trend of market expansion both inside the country and abroad, due to the relatively low base in 2021. The main export market that is expected to expand from the previous year is Laos. Other key markets, especially Myanmar, Vietnam, Cambodia, the Philippines and Singapore are expected to recover but there may be a growth rate that is not very high.

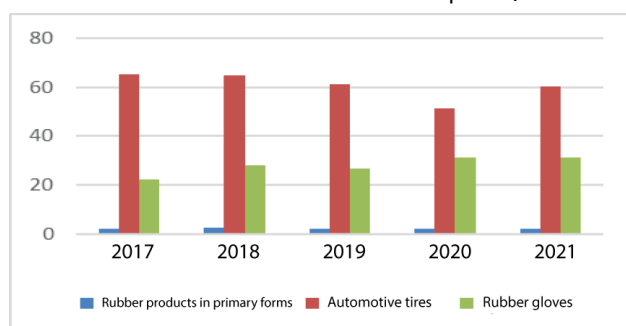
### Government Policies Related to the Pharmaceutical Industry

The Ministry of Public Health accelerates the promotion of research and development for the production of herbal medicines and biological materials for pharmaceutical stability and increase the competitiveness of the Thai Pharmaceutical manufacturing industry, through the National pharmaceutical policy and the national pharmaceutical system development strategic plan 2020-2022, people will have universal and reasonable access to quality essential medicines.

## Rubber and Rubber Products Industry

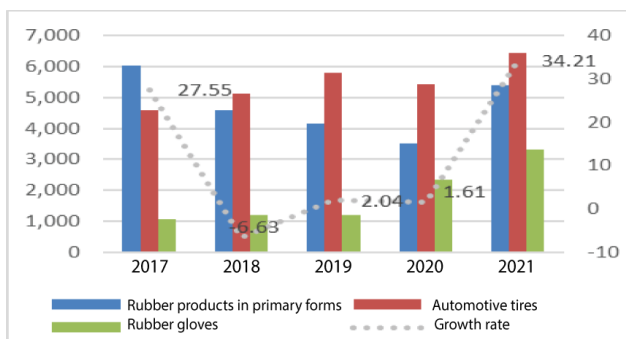
Volume of production and distribution of primary processed rubber and the production and distribution of automotive tires in 2021 is expected to increase from the previous year, as the demand for both domestic and international use has increased. Meanwhile, the production and distribution of rubber gloves is expected to decline due to the increasing number of competitors in Thailand resulting in a decrease in orders.

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



Source: The Office of Industrial Economics

**Export value of processed rubber in primarily processed rubber, automotive tires and rubber gloves (million USD)**



Source: Ministry of Commerce

### *Production of primarily processed rubber, automotive tires and rubber gloves*

in 2021 is expected to reach 1.95 million metric tons, 60.23 million tires and 31,100 million pieces, respectively. The production of primary processed rubber and automobile tires increased by 5.07 percent and 17.26 percent from the previous year, respectively, in line with the good growth trend of both domestic and international markets. Meanwhile, the production of rubber gloves decreased by 0.65 percent following the slowdown trend in the domestic market.

### *Sales of primarily processed rubber, automotive tires and rubber gloves*

in 2021 are expected to reach 480,000 tons, 44.00 million tires and 2,700 million pieces, respectively. the sales of primarily processed rubber and automotive tires increased by 1.99 percent and 13.58 percent from the previous year, respectively. Meanwhile, the sales of rubber gloves decreased by 14.74 percent due to the decline in demand from the situation COVID-19 outbreak in the country that began to unravel.

### *Exports of primarily processed rubber, automotive tires and rubber gloves*

in 2021 are expected to value 5,400, 6,440.01 and 3,330.31 million USD, respectively, exports of primarily processed rubber, automotive tires and rubber gloves increased from the previous year by 53.18, 18.52 and 42.05 percent, respectively. According to the expansion trend of the manufacturing industry in China, global economic expansion including the good expansion of the United States of America market which is Thailand's main market for automotive tires and rubber gloves.

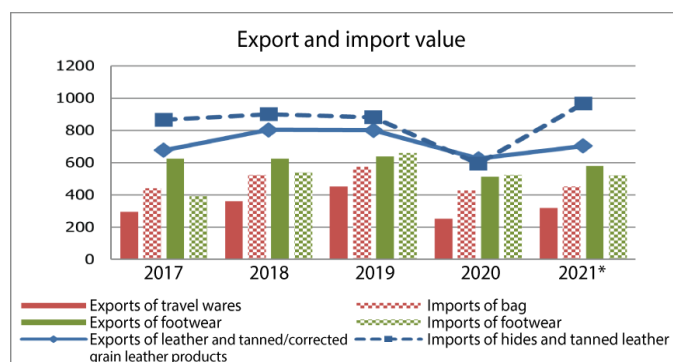
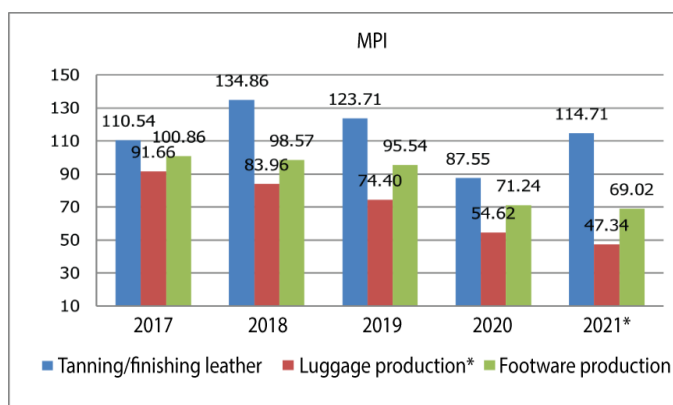
## 2022 Outlook for the Rubber and Rubber Products Industry

According to the expansion trend of the world market, production of predominantly processed rubber, automobile tires and rubber gloves in 2022 is predicted to increase by 3.00 percent in all products, as the situation of the COVID-19 pandemic in many countries has alleviated. The manufacturing sector and household consumption both recovered as a result of this.

## Footwear and Leather Products Industry

In 2021 compared to the previous year, leather tanning/finishing is expected to have more production in line with increasing demand from domestic sales and exports for luggage and footwear are expected to decline. However, it is expected that the outlook for exports and domestic sales will improve because the world hastened to vaccinate people and the government has measures to stimulate spending to build confidence for people to support the opening of the country at the end of the year.

### Production, Exports and Imports (million USD)



Source: 1. MPI – The Office of Industrial Economics;

2. Export and import value—Ministry of Commerce

\* including handbags and similar products, saddles and harnesses

### Production

In 2021 leather tanning/finishing the MPI is expected to increase by 31.03 percent compared to the previous year. Production of luggage products\* and footwear production is expected to slow down by 13.33 percent and 3.11 percent due to lower demand from domestic sales as consumers are more cautious in their spending, which is the impact of the situation of the COVID-19 pandemic that came back to spread again.

### Exports/Imports

Exports in 2021 totaled 1,601.91 million USD, an increase of 13.34 percent compared to the previous year. This was a result of the export value of leather and tanned products, travel equipment, shoes and parts that increased by 12.43 percent, 27.02 percent and 13.28 percent, respectively. Due to accelerated vaccination causing the spread of the COVID-19 in many countries, the number of infections and deaths has decreased. The global situation is likely to improve, resulting in a better recovery of the global economy. Its main export markets are Hong Kong, Indonesia, the United States of America, India and Bangladesh.

Imports in 2021 were valued at 1,938.52 million USD, a 20.34 percent increase from the previous year. This was a result of imports of raw leather, tanned leather and luggage, which increased by 62.96 percent and 5.71 percent, respectively. As for footwear imports, there was a decrease of 0.66 percent.

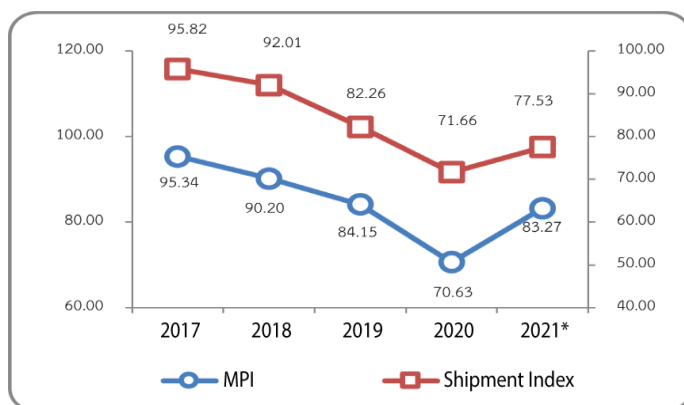
### 2022 Outlook for the Footwear and Leather Product Industry

The production of footwear and leather products in 2022, it is expected that the production of tanned leather and tanned finishing, luggages and footwear will be slightly reduced. Domestic sales, the volume of tanned leather products and luggages increased slightly, but footwear products have also decreased in quantity. Exports are expected to start to recover as more countries can speed up vaccination targets and for import are expect that luggages and footwear will drop slightly.

## Gems and Jewelry Industry

In 2021 due to increased production for export and domestic sales, especially the export of diamonds, gemstones, genuine jewelry and fake jewelry, the entire production and distribution of gems and jewelry grew by diamonds, genuine jewelry and more artificial jewelry. The pandemic scenario of the COVID-19 has alleviated as every country has hastened vaccination, resulting in consumers feeling more assured and spending more.

### Production, Sales and Exports



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

### Production

Overall gems and jewelry production in 2021 increase by 15.92 percent from the production of polished diamonds, genuine jewelry and artificial jewelry which are expected to increase by 25.19, 17.76 and 4.40 percent, respectively. This is attributed to an increase in output for export to international markets because of the COVID-19 pandemic condition. The government of all countries began to speed up vaccination and this began to unravel.

### Exports-Imports

Gem and jewelry exports (excluding gold) in 2021 are expected to have a total value of 5,938.78 million USD, an increase of 22.01 percent from the export of diamonds, gems, genuine jewelry and artificial jewelry that increased by 25.25, 22.94, 23.60 and 5.22 percent, respectively. The main markets are the United States of America, India and Germany, but overall exports are expected to have a total value of 9,805.93 million USD, a decrease of 46.14 percent from the export value. Gold has not yet formed and has decreased by 71.01 percent.

Gem and jewelry imports (Excluding gold) in 2021 are expected to have a total value of 4,138.64 million USD, an increase of 33.79 percent from imports of diamonds, gemstones, genuine jewelry and artificial jewelry that increased by 29.11 percent, 23.19, 16.13 and 14.75 percent respectively. Key markets were China, Italy, Hong Kong and India.

### 2022 Outlook for the Gems and Jewelry Industry

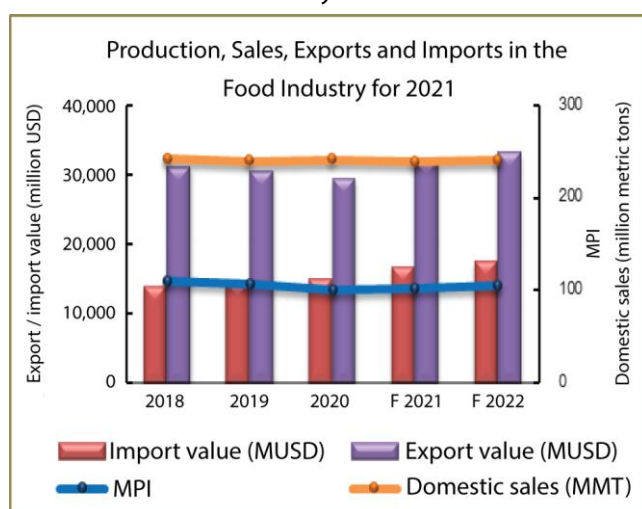
It is expected that diamond, genuine jewelry and artificial jewelry will have a better trend. Due to all countries speeding up vaccination to prevent the spread of the COVID-19 make people have confidence and start shopping and opening the country to tourists will help the gem and jewelry trade tends to improve domestic sales, exports and imports.



## Food Industry

The MPI and exports of the overall food industry in 2021 are expected to expanded compared to the previous year from the gradual recovery of the world economy depreciation of the Thai baht, coupled with the deteriorating drought situation make no problem. The shortage of raw materials for agricultural products to be fed into the factory although affected by the infection of workers in the factory. As a result, some production lines need to be paused.

### Production, Sales, Exports and Imports in the Food Industry for 2021



Source: 1) MPI from the 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 2021 reached 103.0 points, expanded by 1.8 percent (%YoY) from the gradual recovery of the world economy, resulting in continuous orders as demand for consumption increases. Depreciation of the Thai baht coupled with the severe drought situation. Thus, there is no shortage of raw materials from agricultural products such as pineapple, cassava and oil palm. The production of food products expanded well, such as canned pineapple, tapioca starch, table seasoning, pure soybean oil, instant pet food, frozen shrimp and crude palm oil, although the food industry has been affected by the COVID-19 infection of factory workers. As a result, some production lines need to be paused including a shortage of labor in the manufacturing sector.

**Domestic food sales** in 2021 reached 239.3 million metric tons, a slight contraction of 0.9 percent (%YoY) from the key products which are as follows: 1) Canned tuna, which has a strong base due to a surge in demand during the 2020 pandemic. Workers were also infected with COVID-19 in 2021, resulting in lower production. 2) Frozen and chilled chicken, due to a high number of contaminated clusters in the factory and a lack of foreign workers on the production line and 3) Sugar, due to the drought in 2020, sugar cane yields have declined, as has consumer demand in domestic and industrial applications such as the beverage industry, which has slowed as a result of restrictions forbidding sitting and eating and limiting restaurant closing times.

**Exports** in 2021 were valued at 32,052.0 million USD, expanding by 3.7 percent (%YoY) from the key products as follows: 1) Products made from cassava because there is a demand for food in China, which is the first export market. 2) Fresh, chilled, frozen, dried, processed and canned fruits and vegetables because the product quality is of world-class grade and 3) Pet food, as a result of the global tendency toward livestock farming and 4) Fats and oils from plants and animals. Because of COVID-19, the amount of palm oil exported to the international market has reduced, resulting in more orders and shipments of crude palm oil from Thailand, as well as continued demand for palm oil consumption in the Indian market, both in the home and in the industrial sector.

**Imports** in 2021 were valued at 16,731.4 million USD increasing by 10.8 percent (%YoY) as follows: 1) Oilseed products for use in the soybean oil industries. 2) Vegetable oil residue to support the expansion of the animal food industries. 3) Milk and dairy products for use in the dairy and other food industries and 4) Flour products to support the expansion of instant noodles and baked goods industries.

### 2022 Outlook for the Food Industry

It is expected that the food production index in 2022 will continue to expand compared to 2021 due to the recovery of the global economy. As a result, food exports tend to expand in line with the global economy. At the same time, Thailand has opened the country for tourists and relaxed various measures in the country, causing economic activities and consumption to gradually recover again. In addition, it is expected that important agricultural raw materials such as sugar cane, oil palm, cassava and pineapple will increase from 2021, enabling the food industry to have sufficient raw materials to enter the factory. It is expected that food products such as tapioca starch, sugar, palm oil, frozen shrimp and instant pet food are expected to expand well.



## Prepared by

Topic	Coordination Division	Telephone number
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