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## Executive summary


### Summary of the Economic Overview of Thai Industry for Q3/2021


The industrial economy in Q3/2021, when considered from the manufacturing production index (MPI), reduced by 0.8 percent, decreasing from Q2/2021, with an expansion of 20.7 percent due to the spreading of COVID-19 with considerable impacts on economic activities in diverse sectors. The key industries that contracted in Q3/2021 were the petroleum refinery industry. This year, some refineries were shut down for maintenance and domestic needs decreased owing to such an outbreak. As a result, the need for refined fuel was low compared with the previous year. It included **Hard Disk Drives** from the latest wave which was more serious and dissipated more than before and the cluster in a manufacturer's factory, **Motorcycle** due to more severe effects than the former year leading to a shortage of production parts. **The industries that expanded in Q3/2021 were electronic parts** from the marketplaces that grew continuously by the trend of new technological products with assemblies from the electronic parts and **other rubbers products (excluding tires)** because of good expansion in international markets with increasing purchase orders.


### Outlooks of Key Industries, Sorted by Industry, for Q4/2021


 Iron and Steel: It is anticipated to expand compared with the same period in the previous year. The industry incessantly grows and the steel price in world markets is high and competitive among domestic manufacturers.

 Electrical Industry: It is anticipated that the production index and export value increase by approximately 10.32 percent and 3.73 percent respectively, the consumers have taken the COVID-19 vaccine and the outbreak becomes relaxed. Furthermore, the impacts of flooding cause electric appliances to be needed much more by consumers in the country. Besides, the situation of COVID-19 has become better to the exports market of Thailand, which is positively expanding the export of the electric appliance industry. However, there are some issues to be considered that may negatively affect the production and export such as stress issues between the USA and China.

 Automobiles: The anticipation in Q4/2021 has revealed that more than 390,000 cars will be manufactured including domestic distribution for 50-55 percent and production for export at 45-50 percent.

 Motorcycles: It is estimated that in Q4/2021, more than 420,000 motorcycles will be manufactured including domestic distribution for 80-85 percent and production for export at 15-20 percent.

 Pulp, Paper and Print Media: It is anticipated paper products for packaging boxes will expand by domestic consumption, supported by applications for online sales and purchases. Meanwhile, the export of the pulp group grows continuously.

 Cement: The manufacturing and distribution are expectedly able to increase from several positive factors such as after the rain season and decreased flooding in different areas. Affected people need to repair their houses and the government construction projects be able to continue proceeding.

↔ Textile and Apparel: The condition of the textile industry expands incessantly with a low baseline in the former year and the incoming of foreign orders throughout the supply chain. Meanwhile, the apparel industry diminishes less from the countries reopening policy that can boost up domestic consumption and key partner countries like the USA, China and European countries recover. However, it is necessary to follow up impacts from the shortage of fuel in China, causing the price of raw materials like thread and polyester yarns to become higher and create shortages with adverse effects on apparel production. Therefore, entrepreneurs postponed their production while the advanced purchase orders are few because of a lack of confidence in delivery commitment.

↑ Wood and Furnitures: The manufacturing of wooden furniture will continuously expand to meet the demand both of domestic and foreign countries. Nevertheless, the volume of wooden furniture sales in the country is anticipated to grow again because of the improving COVID-19 situation.

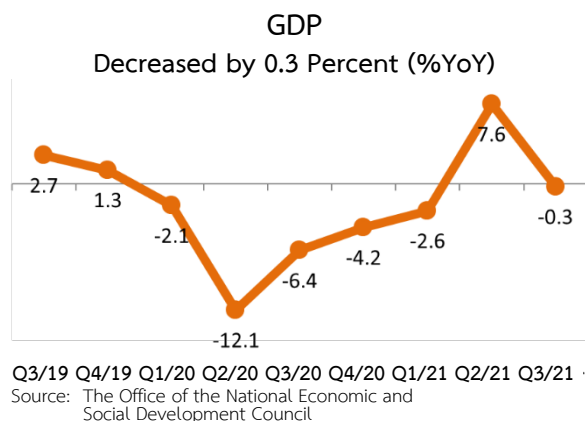
↔ Pharmaceutical: The manufacturing of pharmaceuticals in Q4/2021 expects to expand compared to the same quarter in the previous year by 5.31 percent by the tendency of goods expansion of the domestic pharmaceutical market. The export is anticipated to decrease by 3.34 percent especially in Vietnam, Myanmar, the Philippines and Laos that have decreased continuously from the previous quarter of the demand for medicine from Thailand.

↔ Rubber and Rubber Products: The manufacturing of car tires in Q4/2021 is expected to expand by 0.31 percent. According to the expansion trend of the export market, nitrile gloves may decrease by 5.17 percent because of the increasing number of trade competitors, and Thailand cannot compete the price. For primary rubber production, it is forecasted to grow by 5.00 percent referring to the trend of the need for primary instant rubber that shall increase in both domestic and international markets.

↑ Food: It has been anticipated that the manufacturing production index and export value slightly increase compared with the same quarter in the previous year. The world economy and trade tends to grow ceaselessly and a positive factor from the depreciation of the Thai Baht, and the easement of lockdown measures in the country and re-opening country for foreign tourists from 1<sup>st</sup> November 2021. However, the production and export situations are still at risk from a highly uncertain outbreak.

## **Part 1** Overview of Economy and Industry of Thailand in Q3/2021

## Overview of Economy and Industry of Thailand in Q3/2021



*Gross Domestic Product or GDP in Q3/2021 reduced by 0.3 percent, from the previous quarter that expanded by 7.6 percent. However, it was better compared with the same period in the previous year that decreased by 6.4 percent.*

GDP of the industrial sector in Q3/2021 decreased significantly from the previous quarter, and it initially shrank from Q4/2020 from decreasing domestic demand due to the outbreak of COVID-19 in areas of the factories and establishments. Meanwhile, international demand has remained growing by the expansion of the world market. However, Thailand should take serious measures to control the outbreak in border areas and accelerate vaccination to be inclusive and thorough.

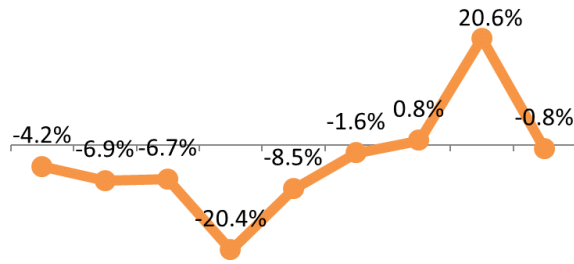
**GDP of the industrial sector** in Q3/2021 has decreased by 1.4 percent from the previous quarter with an expansion of 16.9 percent because of decreased domestic demand.

However, foreign demand still grows from automobiles, electronics and electrical appliance industries. It is better when compared with the same period in the previous year that contracted by 5.3 percent.

## Key Industry Indexes

### Manufacturing Production Index

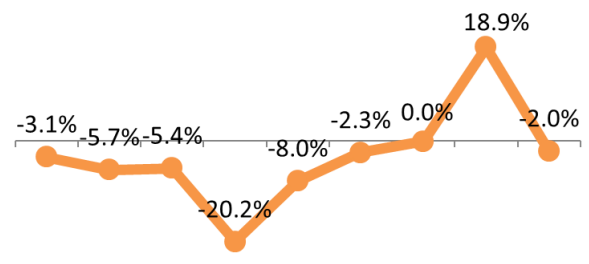
*Shinking 0.8 Percent*  
(%YoY)



Q3/19 Q4/19 Q1/20 Q2/20 Q3/20 Q4/20 Q1/21 Q2/21 Q3/21  
Source: The Office of Industrial Economics

### Shipment Index

*Shinking 2.0 Percent*  
(%YoY)



Q3/19 Q4/19 Q1/20 Q2/20 Q3/20 Q4/20 Q1/21 Q2/21 Q3/21  
Source: The Office of Industrial Economics

In Q3/2021, the manufacturing production index was 90.43, decreasing from the previous quarter (96.73) by 6.5 percent, and falling from the same quarter of 2020 (91.13) by 0.8 percent.

The industries that caused the decreased manufacturing production index from the previous quarter were the manufacturing of air-conditioners, automobiles and sugar.

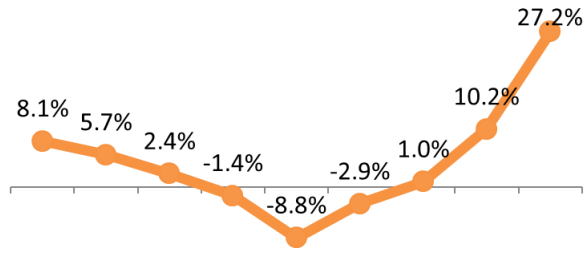
The industries that resulted in the fall of the manufacturing production index in the same quarter of year 2020 included petroleum refinery products, computers and accessories, and motorcycles.

In Q3/2021, the shipment Index was 91.91 percent, decreasing from the previous quarter (97.9) by 6.1 percent, and reducing from the same quarter of 2020 (93.76) by 2.0 percent.

The industries that led to the decrease of the shipment index from the previous quarter were the manufacturing of air-conditioners, automobiles and motorcycles.

The industries that decreased the shipment index compared to the same quarter of year 2020 were petroleum refineries, motorcycles, malt and malt-based liquor products.

**Inventory Index**  
*Increased by 27.2 percent*  
 (%YoY)



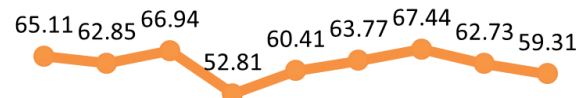
Q3/19 Q4/19 Q1/20 Q2/20 Q3/20 Q4/20 Q1/21 Q2/21 Q3/21  
 Source: The Office of Industrial Economics

In Q3/2021, the inventory index at 152.08 percent, increasing from the previous quarter (141.13) by 7.8 percent, and rising from the same quarter of 2020 (119.56) by 27.2 percent.

The industries that have led to the increase of the inventory index from the previous quarter were the manufacturing of computers, accessories, automobiles and other rubber products.

The industries that have brought the increasing of the inventory index from the same quarter of the year 2020, were the manufacturing of automobiles, computers, accessories and other rubber products, respectively.

**Capacity Utilization Rate**  
*Being at 59.31 percent*



Q3/19 Q4/19 Q1/20 Q2/20 Q3/20 Q4/20 Q1/21 Q2/21 Q3/21  
 Source: The Office of Industrial Economics

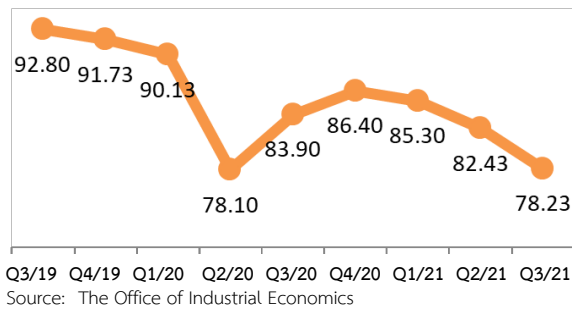
In Q3/2021, the capacity utilization rate is 59.31 percent, decreasing from the previous quarter (62.73 percent) and reducing from the same quarter of year 2020 (60.41 percent).

The key industries that decreased in the capacity utilization rate from the previous quarter were the manufacturing of automobiles, petroleum refinery and air-conditioners.

The industries that have dropped in the capacity utilization rate from the same quarter of year 2020, are the manufacturing of computers and accessories, motorcycles and malt and malt-based liquor products.

## Industrial Sentiment Index

Q3 is being at 78.23



In Q3/2021, the industrial sentiment index is 78.23 percent, it decreased from the previous quarter by 82.43 percent and dropped from the same quarter of the year 2020 by 83.90 percent. The 3 months of the advance forecast of the sentiment index is 91.07 percent, reducing from the same quarter of the year 2020 by 93.60 percent.

Negative factors that are still affect directly the industrial sentiment in Q3/2021 are ongoing and severe outbreaks of COVID-19 in Thailand from the beginning of June 2021 until the end of the Q3 when the outbreak has not spread all over the nation. As a result, the government needed to uplift the disease control measures and expand the maximum controlled areas from 13 to 29 provinces and enforce lockdown measures. In August, the number of infected patients in Q3 increased from the previous quarter, for 15,000-18,000 persons/ day on average. From such lockdown measures, the domestic economic activities decreased with work from home. The vaccines for people and industrial personnel did not meet the target and the outbreak in the industrial sector was not eased. Finally, it led to the delay of product delivery, especially for the export-oriented industry. Furthermore, the entrepreneurs in Thailand encountered higher operation costs from the oil price.

With the higher transport cost that occurs some exporters must have faced a very high ocean freight rate since the beginning of the year 2021, which is effectively impacting the higher cost of transportation. Furthermore, the shortage of semiconductor chips affected the supply chain in the entire world in the industry of automobiles, electrics and electronics, respectively.



## Foreign Trade

*“Value of the foreign trade in Q3/2021 has increased compared with the value of the previous year, supported by the rebound of economic conditions and the continuously increasing world trade. Many countries started to ease COVID-19 control measures and began re-opening with confidence from accelerated vaccination for people that can support the economic restoration.”*

The foreign trade of Thailand in Q3/2021 has a total value of 135,748.5 million USD, with the value of the export of 67,663.1 million USD, expanding by 15.3 percent, compared with the same period of the previous year. The import has a total value of 68,085.4 million USD, increasing by 41.0 percent compared to the previous year. The balance of trade in Q3/2021 has a deficit of 422.4 million USD.

### Structure of Exports

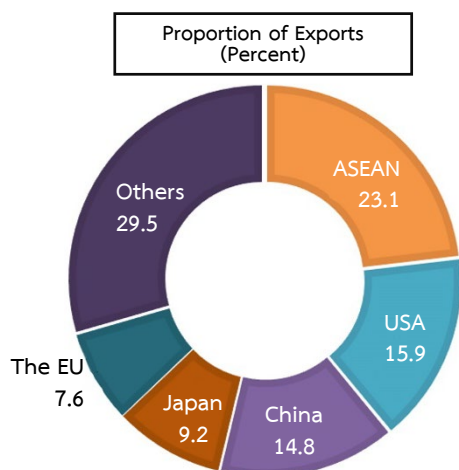


Source: The Ministry of Commerce

The export of Thailand in Q3/2021 has a value of 67,663.1 million USD, expanding by 15.3 percent compared to the previous year. The key product categories that have been changed are agricultural products with the export value of 6,670.5 million USD or 34.3 percent expansion, industrial agricultural products with the export value of 4,734.1 million USD or 4.0 percent expansion, industrial products with the export value of 53,485.2 USD or 12.1 percent expansion, ore and fuel products with the export value of 2,773.2 million USD or 89.5 percent expansion.

The industrial goods with expanded export include automobiles, equipment and components with the export value of 6,505.2 million USD or 19.1 percent expansion, computers, equipment and components with the export value of 5,700.3 million USD or 17.7 percent expansion, rubber products the export value of 3,474.2 million USD or 8.2 percent expansion, plastic pellets with the export value of 2,999.0 million USD or 50.8 expansion and chemical products with the export value of 2,702.9 million USD or 51.7 percent expansion respectively.

## Export Markets

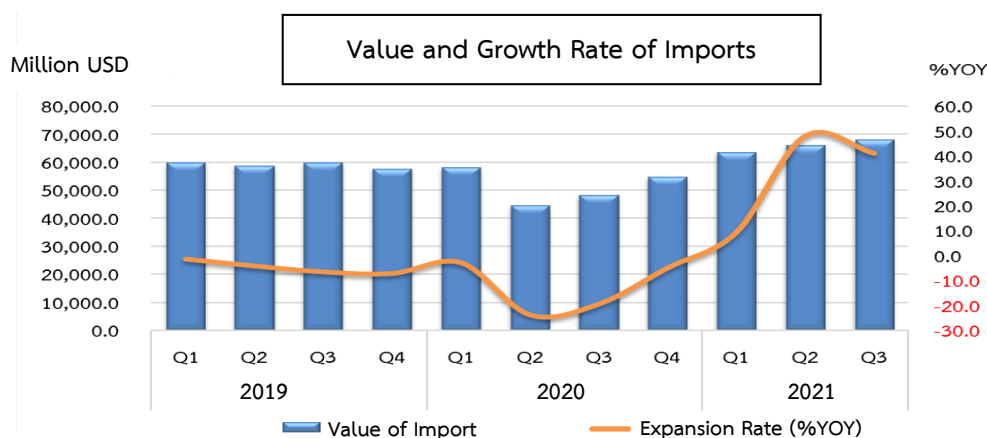


Source: The Ministry of Commerce

In Q3/2021, the export of goods to the main trading partner markets of Thailand has expanded in every market including ASEAN (9 countries), the USA, China, Japan and the EU (27 countries). The export proportion of 5 markets included ASEAN (9 countries), the USA, China, Japan and the EU (27 countries) by 70.6 percent and other markets by 29.4 percent of all exports in the following chart.

- Thailand has the proportion of export value in ASEAN (9 countries), the USA, China, Japan and the EU (27 countries) for 23.1, 15.9, 14.8, 9.2 and 7.6 respectively.
- The expansion rate of the export value, compared with the same period of the previous year that found that the main trading partners have expanded in every market. Especially, China has the most expansion with 32.2 percent, followed by the USA with 19.6 percent, ASEAN (9 countries) by 18.32 percent, the EU with 16.4 percent and Japan with 15.4 percent.

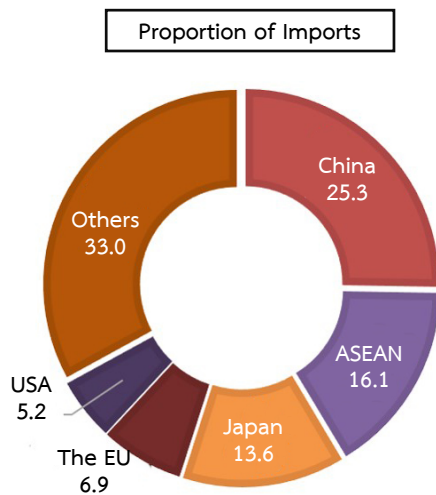
## Import Structure



Source: The Ministry of Commerce

In Q3/2021, the total import value of Thailand is 68,085.41 million USD or with 41.0 percent expansion compared to the previous year. The product categories that have changed are fuel with the import value of 10,479.67 million USD or 65.3 percent expansion, capital products with the import value of 16,896.2 million USD or 24.7 percent expansion, raw materials and instant products with the import value of 29,481.6 million USD or 53.6 percent expansion, consumption goods with the import value of 7,573.84 million USD or 19.2 percent expansion, vehicles and transport equipments with the import value of 3,555.2 million USD or 42.8 percent expansion, weapons and military supplies with the import value of 98.9 million USD or 72.6 percent reduction.

## Import markets



Source: The Ministry of Commerce.

In Q3/2021, all of the import markets in Thailand have expanded, which is in line with the export trend following China, ASEAN (9 countries), Japan, the EU (27 countries) and the USA. These 5 markets have the proportion of import for 67.0 percent while other markets are accounted to be 33.0 percent of all imports in the statistics chart.

- Thailand has an import value proportion from China, ASEAN (9 countries), Japan, the EU (27 countries) and the USA of 25.3, 16.1, 13.6, 6.9 and 5.1, respectively.
- The growth rate of import values compared with the same month of the previous year in the main markets, found that the expansion was the same way as exports especially for Japan expanding by 60.3 percent, China expanding by 38.9 percent, the EU (27 countries) expanding by 25.3 percent, the USA expanding by 19.7 percent and ASEAN (9 countries) expanding by 15.8 percent.

## Global Economy in Q3/2021

“The global economy has well-restored because many countries have eased the outbreak control measures along with supporting factors of the economic boosting policy in each country as well as thorough vaccination to bring confidence to every sector. As a result, the economic activities have expanded.”

### Summary of Key Economies in Q3/2021

(%YoY)

	GDP	Inflation	MPI	Export	Import	Unemp. Rate	Policy Rate
USA	↑ 4.7	↑ 5.3	↑ 6.2	↑ 23.4	↑ 19.3	At 5.2	At 0.00-0.25
China	↑ 4.9	↑ 1.0	↑ 4.9	↑ 23.9	↑ 26.5	At 3.9	At 4.35
Japan	↑ 7.6 <sup>a</sup>	↓ 0.7	↑ 5.7	↑ 20.4	↑ 31.8	At 2.8	At -0.10
South Korea	↑ 4.0	↑ 2.6	↑ 5.0	↑ 26.5	↑ 37.5	At 2.8	At 0.75
Singapore	↑ 6.5	↑ 2.5	↑ 7.2	↑ 19.3	↑ 23.0	At 2.4	At 0.67
Thailand	↓ 0.3	↑ 0.7	↓ 0.7	↑ 15.3	↑ 41.0	At 1.9 <sup>a</sup>	At 0.50

Source: ceicdata, <https://www.nesdc.go.th>, <https://www.trademap.org>, <http://tradereport.moc.go.th>  
 Note: <sup>a</sup> Number of Q2/2021

The overall global economy tends to expand continuously, which is reflected from the expansion of the production and trade volume of the key economic countries with the same unemployment rate because the labor market is unable to rebound with its full potentials. The inflation rate is likely to increase while the policy-based interest rate of several countries is still low. The Federal Reserve retains the policy-based interest rate at 0.00-0.25 percent which strengthens liquidity for entrepreneurs and accommodates the domestic business and investment sectors to carry on.

The crude oil price tends to increase, partly because of stern supply from decreased production capacity. Previously, some members of OPEC encountered the outbreak of the COVID-19 while oil demand for various activities is increasing. As a result, the price of Dubai crude oil in the Q3/2021 is 71.8 USD per barrel on average, increasing from the Q3/2020 at 43.0 USD per barrel. Meanwhile, the price of NYMEX crude oil in September was 71.4 USD per barrel on average.

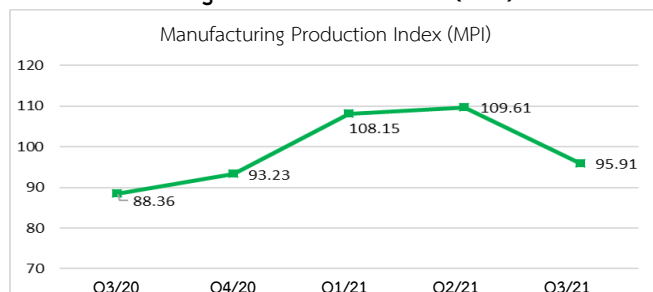
However, there are still some issues about the global economy to be monitored such as the uncertainty of the COVID-19 mutation that may result in the new wave of outbreaks, fluctuation of the world economy as well as problems with the production and export sectors due to the higher cost of oil price, delivery delays and higher freights. Nevertheless, under the policy of the country reopening by the better situation of the outbreak and unceasing vaccination, it is positive for business operation especially for the production of the export sector that remains steady, as the economy in the countries of key trade partners that recovers continuously.

**Part 2:** Economy and Industry of Thailand by Industry in Quarter 3/2021,  
and Outlook in Quarter 4/2021

## Iron and Steel Industry

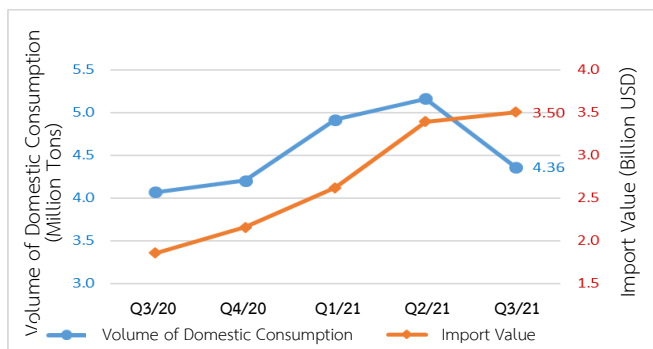
MPI of the steel industry in Q3/2021 has expanded, compared with the same period of the year 2020 from production of flat steel goods such as cold-rolled steel sheets, tin-coated steel sheet and galvanized steel sheets.

### Manufacturing Production Index (MPI)



Source: The Office of Industrial Economics

### Domestic Consumption and Import Values



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

**Production:** In Q3/2021, MPI is 95.9, expanding from the same quarter in the previous year by 8.5 percent (%YoY), but decreasing from the previous quarter by 12.5 percent (%QoQ) because of higher steel prices in the global market, compared with the same period of the previous year. The production of flat steel has increased by 45.7 percent. The product with the highest expansion is cold-pressed steel sheets by 106.2 percent, followed by tin-coated steel and galvanized steel by 94.6 percent and 79.8 percent, respectively. However, the production of long steel declined by 11.3 percent because of the slowdown of need from control and prevention of the outbreak among construction workers. The product with the most contraction was round steel by 43.4 percent, followed by the deformed bar for 32.9 percent and high tensile steel for 10.1 percent.

**Domestic:** In Q3/2021, it is 4.4 million tons, expanding from the same quarter in the previous year by 7.2 percent (%YoY), but decreasing from the former quarter by 15.5 percent (%QoQ). Compared with the same quarter of the previous year, the consumption of flat steel has increased by 25.8 percent, cold-pressed steel sheet has expanded by 87.0 percent, followed by hot-pressed steel sheet by 59.8 percent and tin-coated steel by 31.3 percent. However, the consumption of long steel has shank by 20.4 percent from consumption of steel bar and hot-pressed steel with contraction by 29.6 percent and steel wire by 10.3 percent.

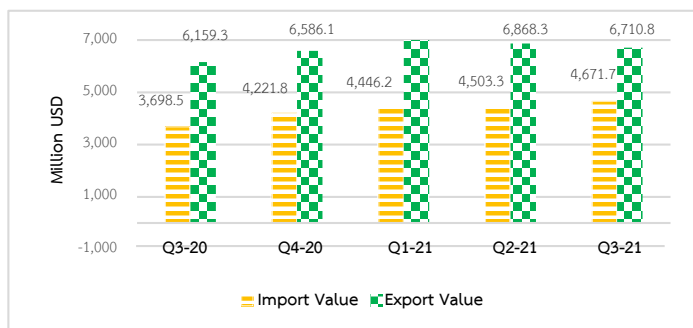
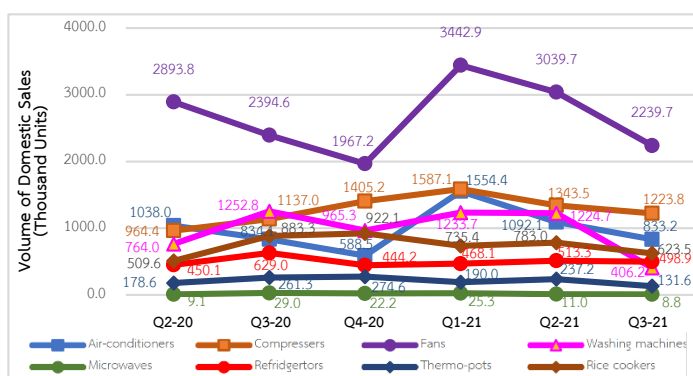
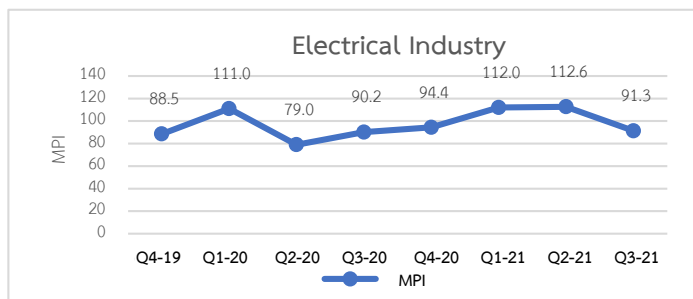
**Import:** In Q3/2021, it is valued at 3.5 billion USD, expanding from the same quarter of the previous year by 88.8 percent (%YoY), and from the precedent quarter by 3.3 percent (%QoQ). Compared with the same quarter of the previous year, the import of long steel has expanded by 77.0 percent. The product with the highest expansion of import is carbon steel, expanding by 549.5 percent (Thailand has imported from these main following countries as Japan, South Korea, and China), followed by alloy steel expanding by 223.0 percent and stainless steel by 140.0 percent. Regarding the import of flat steel, it rose by 92.6 percent and the product with the highest expansion of import is the carbon steel P&O expanding by 576.1 percent (Countries that Thailand imports are Japan, South Korea, and Taiwan), followed by hot-pressed alloy steel expanding by 261.1 percent and hot-pressed carbon steel, expanding by 214.5 percent.

### Outlook of Iron and Steel Industry in Q4/2021

The trend of the iron and steel industry in Q4/2021 is slightly expanding when compared with the previous year. According to the continuous growth of the industry and the high price of steel in the world market and the competitive opportunity of domestic manufacturers. However, it is at risk from the outbreak of the COVID-19 of continuing industries that may lead to the slowdown of steel demand.

## Electrical Industry

The manufacturing of electric appliances in Q3/2021 increased by 1.3 percent when compared year on year because of the global economy that started to recover leading to a higher volume of purchase orders for electric appliances from Thailand. The products with the expansion included refrigerators, electric wires and cables, transformers and electric fans. The export value has expanded in markets of the USA, China and Japan.



Source: The Office of Industrial Economics, Ministry of Commerce and Electrical and Electronic Institutes

**Production:** In Q3/2021, MPI is 91.3, reducing from the previous quarter by 18.9 percent (%QoQ), and increasing when compared with the same quarter in the previous year by 1.3 percent (%YoY). According to the higher purchase orders of domestic and foreign markets from the recovery of the world economy from the situation of the COVID-19 outbreak and demand from key world markets. The products with the expansion included electric motors and compressors increased by 93.5 percent and 7.1 percent, respectively.

**Domestic sales:** In Q3/2021, the products that expanded, compared with the same quarter of the previous year, are electric kettles and electric motors by 51.7 percent and 3.33 percent, respectively.

**Import:** In Q3/2021, it is valued at 4671.7 million USD, increasing from the previous quarter by 3.7 percent (%QoQ) and increasing from the same quarter of the previous year by 26.3 percent (%YoY). The main products with increased import were electric fans, compressors and refrigerators by 79.5, 55.2 and 25.9 percent, respectively.

**Export sales:** In Q3/2021, it is valued at 6,710.8 million USD, declining from the previous quarter by 2.3 percent (%QoQ), but expanding from the same quarter of the previous year by 9.0 percent (%YoY). Electric wires, transformers and electric fans grew by 15.8, 30.6 and 23.1 percent, respectively while microwave ovens, cables, refrigerators and washing machines reduced by 39.4, 16.6, 0.6 and 0.3 percent, respectively.

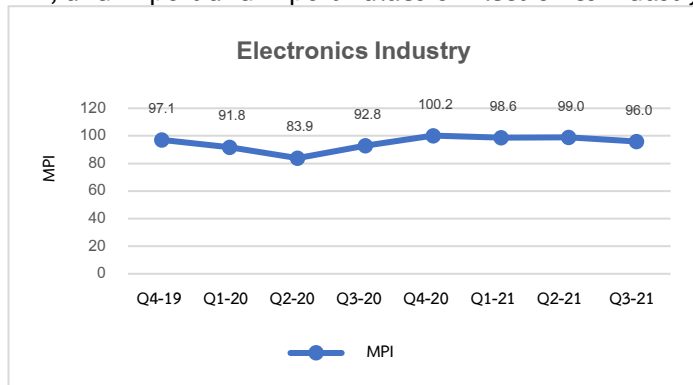
### Outlook of Electrical Industry in Q4/2021

It is anticipated that MPI and export value remains growing for about 10.32 percent and 3.73 percent, respectively because more consumers have taken the COVID-19 vaccine and the outbreak situation becomes better as well as impacts from the flood. Therefore, electric appliances are highly needed among consumers. With the better situation of the COVID-19 in the main export markets of Thailand, it is positive to the expansion of export of the electric appliance industry. However, there are issues to be considered which may negatively affect production and export such as the stress situation between the USA and China.

## Electronics Industry

The manufacturing of electronic products in Q3/2021 has expanded by 3.4 percent when compared with the same quarter of the previous year because the main export markets of Thailand started to recover from the situation of the COVID-19 outbreak, as well as the expansion of the network and development of 5G Technology, Data Center, IoT and products for IT infrastructure. As a result, there were more purchase orders from foreign countries. The products with expansion included HDD and integrated circuits (IC) with increased export value in the USA, China and Asia.

### MPI, and Import and Export Values of Electronics Industry



Source: The Office of Industrial Economics, Ministry of Commerce, and Electrical and Electronic Institutes

**Production:** In Q3/2021, MPI is 96.0, decreasing from the previous quarter by 3.0 percent (%QoQ), but when compared with the same quarter of the previous year, increasing by 3.4 percent (%YoY). The electronic products with expansion included PCBA, PWB, integrated circuit (IC) and semiconductor devices transistor, increasing by 19.6, 11.4, 25.3 and 20.3 percent, respectively. Meanwhile, the electronic products with contraction were printer and HDD, accounting for 12.2 and 10.6 percent, respectively. This is due to the situation of the COVID-19 outbreak, affecting the manufacture. However, electronic parts are still necessary for development of 5G Technology, Data Center and products for IT infrastructure, which are increasingly needed.

**Import:** In Q3/2021, it is valued at 10,907.3 million USD, increasing from the previous quarter by 3.5 percent (%QoQ) and increasing 22.9 percent (%YoY) from the same quarter in the previous year. The main products with expansion were diodes, transistors, semiconductor devices and components, typing circuits, integrated circuits (IC) accounting for 22.1, 16.8, and 15.6 percent, respectively.

**Export sales:** In Q3/2021, it is valued at 10,740.3 million USD, increasing from the previous quarter by 7.2 percent (%QoQ) and 25.2 percent (%YoY) with the same quarter in the previous year, from export to key markets including the USA, China and Asia. Diodes, transistors, semiconductor devices and components, PCBA an integrated circuit (IC) grew for 44.8, 21.4 and 16.4 percent, respectively while printers, photocopiers and component parts declined by 13.8 percent.

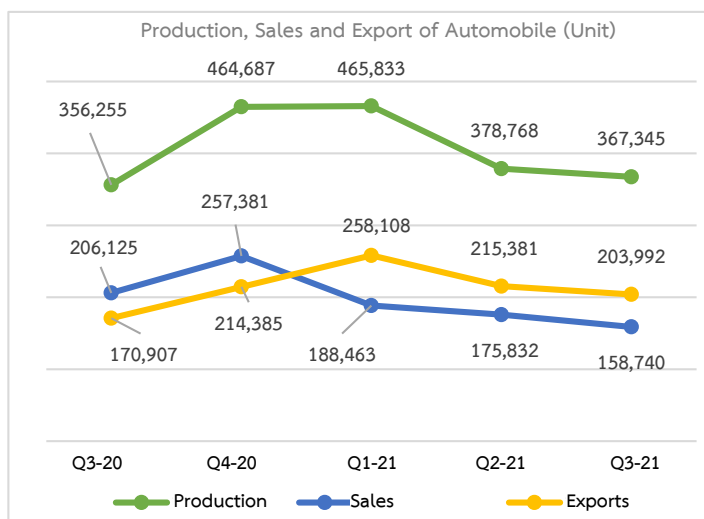
### Outlook of Electronic Industry in Q4/2021

It is anticipated that the manufacturing production index decreases because of a shortage of raw materials especially for the semiconductor group that the products cannot be manufactured with full capacity. However, the export value remains expanding continuously by the growth of the world market and key consumer's markets of electronic devices where the economy starts to recover such as China, the USA and Europe. Therefore, Thailand may have an increase in production and export of electronic devices in the long run due to the expansion of the world market. However, there are some issues to consider such as the shortage of chips, which possibly affects the supply chain, production in electronic industry and other industries using electronic parts, production and export of electronic devices in short term.

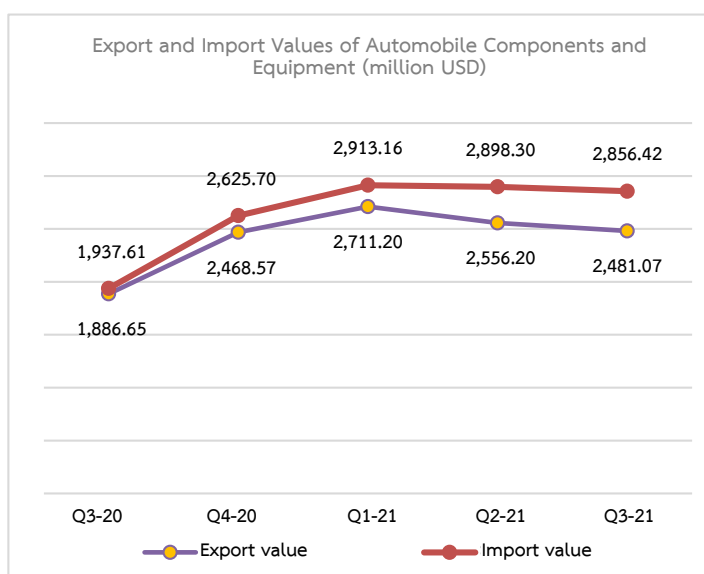


## Automotive and Part Industry

The automobile manufacturing volume in Q3/2021 has expanded when compared year on year because of a low base due to temporary cessation of production from the 1st wave of the COVID-19 outbreak. For export markets, they grew continuously due to the world economy starting to recover since the measure of the COVID-19 vaccine e has become clear and the economic boost-up measure has been implemented in every country. However, the domestic distribution encountered slowdown because of domestic purchasing power that has not yet retrieved.



Source: The Office of Industrial Economics, Gathered from Automobile Group, the Federation of Thai Industries



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce, with Collaboration from Customs Department

### Outlook of Automobile Industry in Q4/2021

From the forecast by the Office of Industrial Economics in Q4/2021, more than 390,000 cars will be produced including production for domestic distribution at 50-55 percent and for export at 45-50 percent.

**Production:** In Q3/2021, the total manufacturing is 367,345 units, decreasing from Q2/2021 by 3.02 percent (%QoQ), but increasing from the same quarter of the previous year at 3.11 percent (%YoY) with proportion of sedan cars by 38 percent, 1-ton pick-up trucks by 59 percent and cars for commercial purposes by 3 percent.

**Domestic sales:** In Q3/2021, the total sales is 158,740 units, declining from Q2/2021 by 9.72 percent (%QoQ) and from the same quarter of the previous year by 22.99 percent (%YoY).

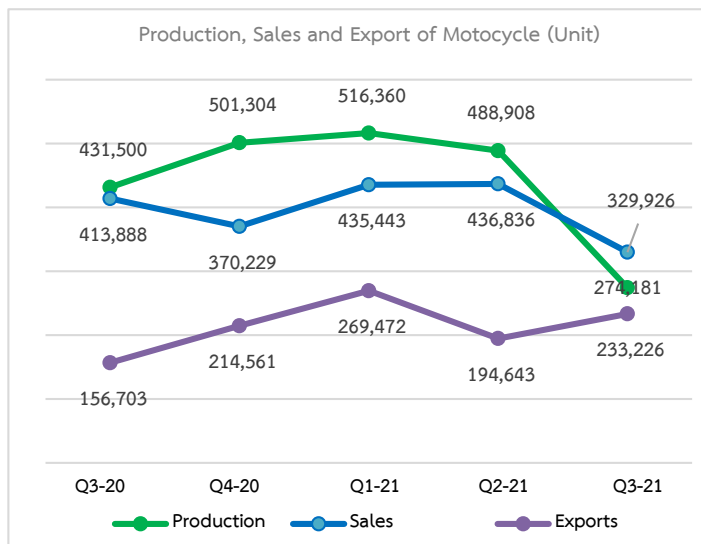
**Export:** In Q3/2021, the total sales is 203,992 units, decreasing from Q2/2021 by 5.29 percent (%QoQ) but increasing from the same quarter of previous year by 19.36 percent (%YoY). The proportion included export of sedan cars for 34 percent, 1-ton pickup cars for 58 percent and PPV for 8 percent.

**Export Value of Automotive Components and Equipment:** In Q3/2021, the total value is 2,481.07 million USD, decreasing from Q2/2021 by 2.94 percent (%QoQ), but growing from the same quarter of previous year by 31.51 percent (%YoY). The key export markets for automotive parts and equipment included the USA, Japan and South Africa.

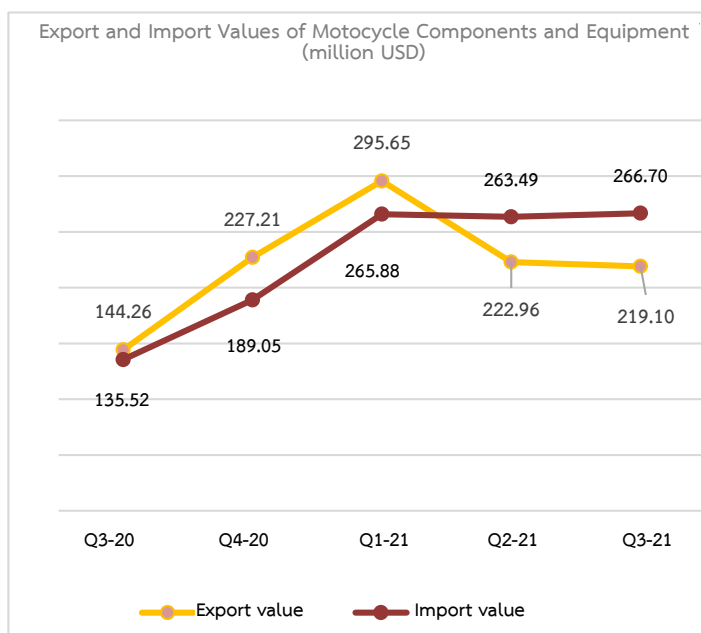
**Import Value of Automotive Components and Equipment:** In Q3/2021, the total value is 2,856.42 million USD, reducing from Q2/2021 by 1.44 percent (%QoQ) but rising from the same quarter of the previous year by 47.42% (%YoY). The important import markets of car parts and equipment were Japan, China and the USA.

## Motorcycle and Motorcycle Part Industry

The production volume of motorcycles in the 3rd quarter of 2021 decreased when compared year on year which was the contraction in domestic market. However, the export markets expanded due to the recovery of the world economy from clear COVID-19 vaccine measures and economic boosting measures, implemented in every country.



Source: The Office of Industrial Economics, Gathered from Automobile Group, the Federation of Thai Industries



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce, with Collaboration from Customs Department

**Production:** In Q3/2021, the total manufacturing is 274,181 units, reducing from Q2/2021 by 43.92 percent (%QoQ) and from the same quarter of the previous year by 23.54 percent (%YoY).

**Domestic sales:** In Q3/2021, the total sales is 329,926 units, decreasing from Q2/2021 by 24.47 percent (%QoQ), and from the same quarter of previous year by 20.29 percent (%YoY).

**Export sales:** In Q3/2021, the total sales is 233,226 units (CBU export for 100,938 units and CKD for 132,288 sets), growing from Q2/2021 by 19.82 percent (%QoQ) and from the same quarter of previous year at 48.83 percent (%YoY).

**Export Value of Motorcycle Components and Equipment:** In Q3/2021, the total value is 219.10 million USD, reducing from Q2/2021 by 1.73 percent (%QoQ), but increasing from the same quarter of the previous year by 51.88 percent (%YoY). The key export markets of motorcycle parts are Cambodia, Brazil and Japan.

**Export Value of Motorcycle Components and Equipment:** In Q3/2021, the total value is 266.70 million USD, increasing from Q2/2021 by 1.22 percent (%QoQ) and from the same quarter of the previous year by 96.80 percent (%YoY). The important import markets for motorcycle parts and equipment included Japan, China and the USA.

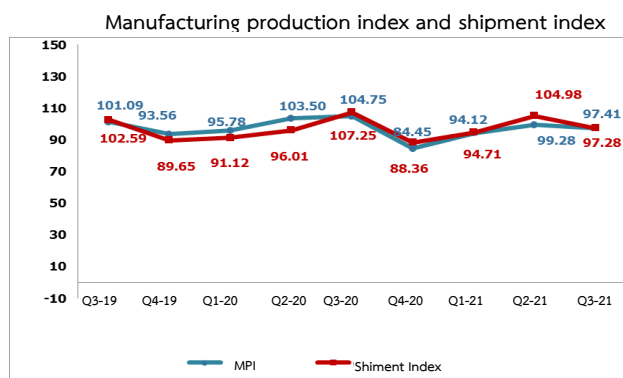
### Outlook of Motorcycle Industry Q4/2021

From the forecast by the Office of Industrial Economics in Q4/2021, more than 420,000 units will be manufactured for domestic sales at 80-85 percent and export sales by 15-20 percent.

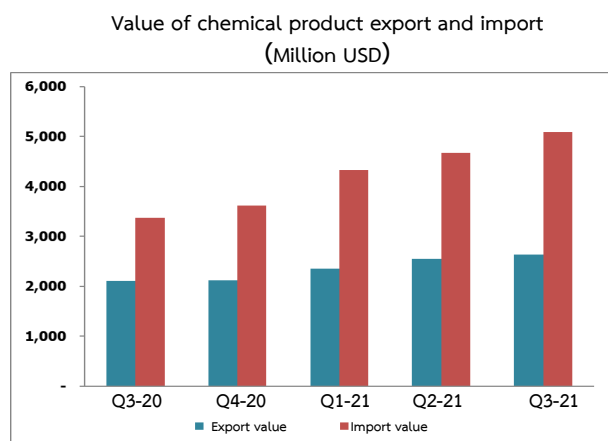
## Chemical Industry

The chemical industry in Q3/2021 has increased the value of the export and import, compared with the same quarter of the previous year. However, the outbreak of the COVID-19 caused shrinkage of the manufacturing production index of some chemical products. The domestic distribution for chemical products lessened, compared with the same quarter of previous year.

### Marketing and Distribution



Source : The Office of Industrial Economics



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce, with Collaboration from Customs Department

**MPI:** In Q3/2021, the MPI value is 97.41, reducing by 6.31 percent, compared with the same quarter of the previous year (%YoY). The contraction index included softener, plastic watercolor, and soap and skincare products, and for 1.89 percent compared with the previous quarter (%QoQ).

**Shipment index:** In Q3/2021, the value is 97.28, with reduced by 8.53 percent, and compared with the same quarter of the previous year (% YoY). The shipment index with contraction were softener, shampoo, and detergent, and it grew 7.34 percent, when compared with the previous quarter (%QoQ).

**Export sales:** In Q3/2021, the total value is 2,641.28 million USD, expanded by 25.18 percent, compared with the same quarter of the previous year (%YoY). The main products that increased export value included chemical fertilizer, organic chemical products, and non-organic chemical products. Compared with the previous quarter (%QoQ), increased by 3.62 percent. The key markets of export have expanded such as China, Japan, India and Indonesia.

**Import:** In Q3/2021, the total import value is 5,094.86 million USD, expanding by 51.36 percent, compared with the same quarter of the previous year (%YoY). The main products that resulted in the expansion were organic chemical products, non-organic chemical products, and multipurpose chemical products. Compared with the previous quarter (% QoQ), it increased by 9.13 percent.

### Outlook of Chemical Industry in Q4/2021

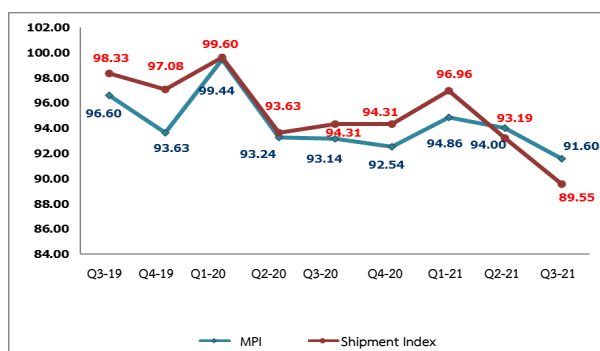
It is anticipated that the export and import of chemical products are likely to increase, when compared with the same quarter of previous year due to the situation of the COVID-19 outbreak in the country and foreign countries becoming better and the country reopening with good impacts on tourism and service businesses such as hotels, tourist attractions and shopping malls. As a result, the industries related to chemicals products will be recovered by consumer's needs.

## Plastic Industry

The plastic industry in Q3/2021 has expanded the export volume, compared with the same quarter of the previous year by market demands of the key trade partners including Japan, the USA, China and the Philippines. Furthermore, due to the situation of the new COVID-19 wave, the government has re-introduced lockdown measures leading to the decrease of production of some plastic products, compared with the same period of the past year.

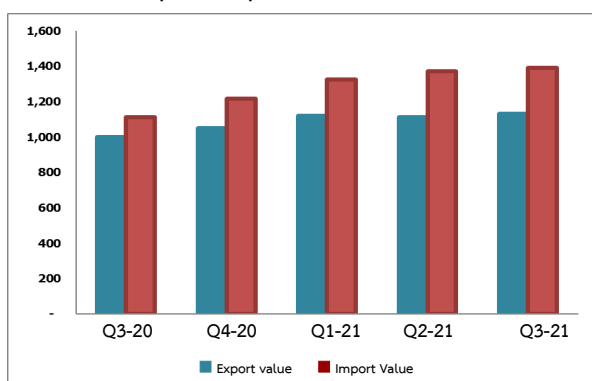
### Production and Marketing

Manufacturing production index-Shipment Index



Source : The Office of Industrial Economics

Export-import volume (tons)



Source: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce, with Collaboration from Customs Department

**MPI:** In Q3/2021, MPI is at 91.60, decreased by 1.65 percent when compared to the same quarter of the previous year (%YoY). The index with the most contraction was plastic bags, and when compared with the previous quarter (%QoQ), it decreased by 2.55 percent.

**Shipment index:** In Q3/2021 is at 89.55, decreased by 5.05 percent, compared with the same quarter of the previous year (%YoY). The shipment index with most reduction is plastic bags, compared with the previous quarter (%QoQ), it declined by 3.91 percent.

**Export value:** In Q3/2021, the value is 1,130.14 million USD, expanding by 13.18 percent, compared to the same quarter in the previous year (%YoY). The product group with highest export expansion is a single long fiber products (HS 3916), and when compared with the previous quarter (%QoQ), with 1.62 expansion.

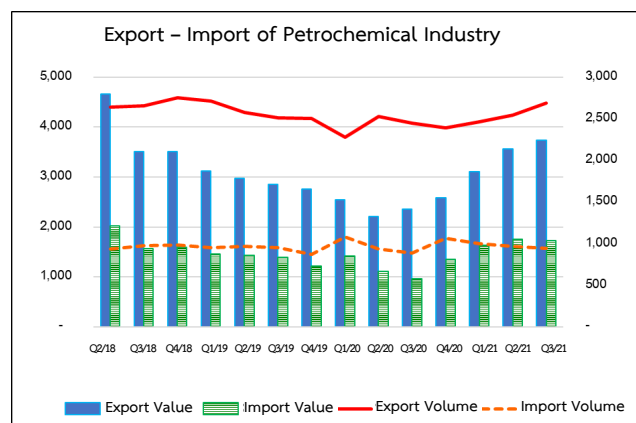
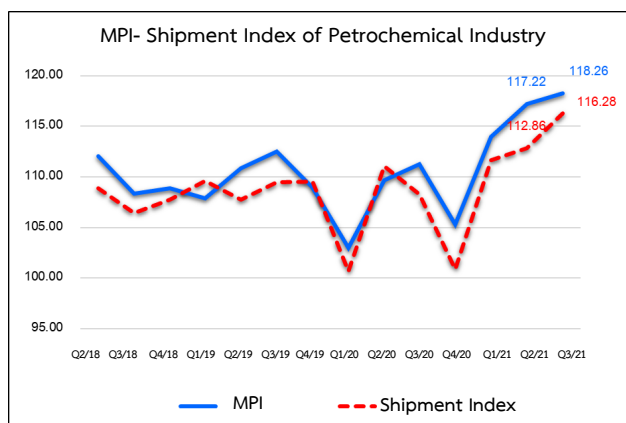
**Import value:** In Q3/2021, the value is 1,391.22 million USD, expanding by 25.33 percent, compared to the same quarter in the previous year (%YoY). The product group with the highest import expansion was a single long-fiber product (HS 3916) with 1.50 percent expansion when compared with the previous quarter (%QoQ).

### Outlook of Plastic Industry in Q4/2021

In Q4/2021, it is necessary to follow up situations after the country re-opening, economic boosting measures from the government and recovery of the tourism industry, which affects products related to the plastic industry to be better. However, price fluctuation of the world's crude oil tends to lead to higher costs of raw materials for production in the plastic industry.

## Petrochemical Industry

MPI and shipment index of the Petrochemical Industry in Q3/2021 has increased, compared with same quarter of previous year at 6.69 percent and 7.62 percent (%YoY) from the situation of the COVID-19 when vaccines were taken in many counties and they eased for lockdown measures that the production and export of petrochemical products in this quarter had good expansion.



**MPI:** In Q3/2021, MPI is 118.26, increasing from the same quarter of previous year by 6.69 percent. The product that increased the manufacturing production index in this quarter of upstream petrochemical group was Ethylenes and of downstream petrochemical group was PP resin.

**Shipment Index:** In Q3/2021, the value was 116.28, increasing from the same quarter of previous year by 7.62 percent. The product that resulted in the increase of shipment index in this quarter of upstream petrochemical group was Propylene and of downstream petrochemical group were PP resin and PE resin.

**Export:** In Q3/2021, the value was 3,741.22 million USD, increasing from the same quarter of previous year by 54.83 percent. It was exported to key countries like China, Vietnam and Japan etc. The products that resulted in the increase of export of upstream petrochemical group for 90.91 percent were Ethylene, Toluene and downstream petrochemical group for 51.91 percent included PP resin and PE resin.

**Import:** In Q3/2021, the value was 1,727.17 million USD, increasing from the same quarter of previous year by 73.53 percent. Petrochemical products were imported from key countries like Japan, China and the USA etc. leading to the increasing import of upstream petrochemical group for 136.46 percent such as Toluene and Propylene and downstream petrochemical group for 62.83 percent including PE resin and PP resin.

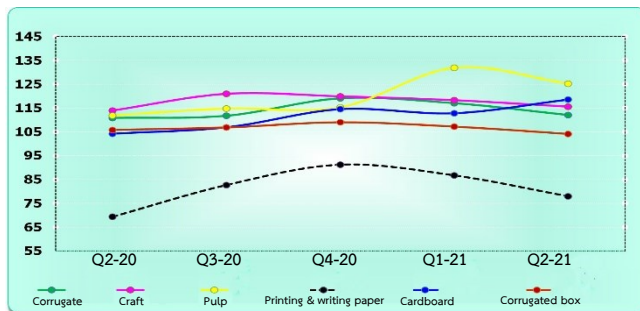
### Outlook of Petrochemical Industry in Q4/2021

The Petrochemical Industry in Q4/2021 is anticipated that, in overall, it tends to expand from economic recovery of various countries after disruption by the situation of the COVID-19 leading to the need for products or more operations in several sectors in foreign trade partners' markets. However, there are negative factors including the shortage of coals and natural gas for electricity generating in China, affecting the increase of oil price with higher costs in the petrochemical industry.

## Pulp, Paper and Print Media Industry

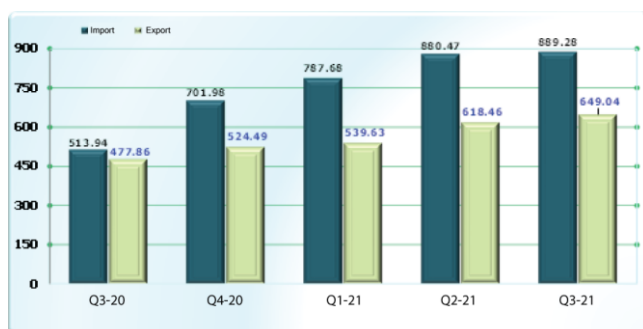
The Pulp, Paper and Print Media Industry in Q3/2021, when compared (%YoY), was found that the production of every product in groups of pulp, hard paper, craft paper and corrugated paper increased, which were used to produce paper boxes. The export and import had increased total value, when compared with the previous quarter (%QoQ) and same quarter of the previous year (%YoY).

Manufacturing Production Index of Pulp and Paper



Source: The Office of Industrial Economics

Export-Import of Pulp, Paper and Print Media



Unit: Million USD

Source: Information technology and communication center, Ministry of Commerce

**Production:** In Q3/2021, when compared to the previous quarter (%QoQ), the production has decreased for every product including pulp (-5.07%), craft paper (-2.29%), corrugated paper (-4.25%), printing paper (-10.11%) except for hard paper (+5.11%). When compared (%YOY), the production grew for pulp (+11.95%), hard paper (+13.77%), craft paper (+1.42%), corrugated paper (+1.11%), printing paper (+12.36%) except for paper boxes that relaxed trivially (-1.58%), partly because of increasing import in this quarter. However, the paper packages are continuously needed especially in the situation of the COVID-19 outbreak.

**Export:** Pulp and paper products in Q3/2021, when compared to the previous quarter (%QoQ) had an export value of 649.04 million USD (+4.94%) from the group of pulp (+31.51%) with China as the main trade partner, publication (+1.53%) with the USA as the main trade partner. When compared (%YoY), total export value (+35.82%) from pulp group was higher (+317.28%) and 94.08% of which was exported to China, while paper and paper products (+1.48%) were mainly exported to China and Vietnam and publications, with slight decrease of export (-0.47%), were exported to the USA.

**Import:** Pulps and paper products in Q3/2021 had a total import value of 889.28 million USD. The import of pulp continuously increased when compared with the previous quarter (%QoQ) and same quarter in the previous year (%YoY) for (+19.80%) and (+242.75%), respectively. Meanwhile, the import of paper and paper products and publications decreased when compared (%QoQ) for (-4.48%) and (-36.75%), respectively. However, when compared (%YoY), the import rose due to the higher need of paper products especially for paper packages due to change in living ways that more customers purchase through online platforms as well as the outbreak of COVID-19.

### Outlook in Q4/2021

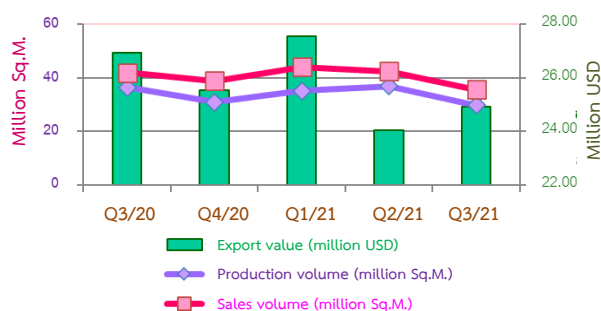
The trend in Q4/2021 is anticipated that paper products for making packages will expand by domestic consumption. Meanwhile, the paper packages are supported by application of online product sale and purchase. The export grows continuously in the pulp group.

## Ceramic industry

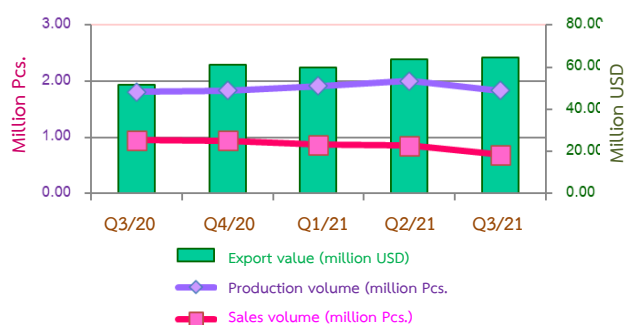
The domestic production and distribution of tiles, floor tiles, wall tiles and sanitary wares in Q3/2021 has decreased from the economic slowdown of domestic markets due to the outbreak of COVID-19. The export expanded by needs of the key markets like the USA, China and Japan.

### Production, Distribution and Export of Ceramics

Production, Sales, and Exports of Wall and Floor Tiles



Production, sales, and exports of wall and floor tiles



- Sources: 1. The volumes of production and domestic Sales: Division of Information and Industrial Economic Indices. Note: From the survey on 15 wall tile factories and 38 sanitary factories  
2. The export value: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce

**Production:** In Q3/2021 of floor tiles, wall tiles was 29.79 million Sq.M, decreasing from Q2/2021 by 19.26 percent (%QoQ), and from the same quarter in previous year by 18.17 percent (%YoY). For sanitary wares, the production volume was 1.84 million pieces, falling from the same quarter in previous year for 8.51 percent as a result of decline of purchase orders in domestic markets.

**Distribution:** In Q3/2021, the tiles, floor tiles, wall tiles had distribution volume of 35.51 million Sq.M, decreasing from Q2/2021 by 16.37 percent (%QoQ) and from the same quarter in previous year at 15.36 percent (%YoY). Meanwhile, the distribution of sanitary ware was 0.69 million pieces, reducing from Q2/2021 by 18.48 percent, and from the same quarter of previous year by 27.20 percent because of economic slowdown in domestic markets since the consumers were concerned about the situation of the COVID-19 outbreak as well as closure of businesses, shops and companies to control the spread.

**Export:** In Q3/2021, the export value of floor tiles, wall tiles was 24.92 million USD, reducing from Q2/2021 by 7.46 percent while the export of sanitary wares was valued of 64.43 million USD, increasing from Q2/2021 by 1.07 percent and from the same quarter of previous year at 24.60 percent. The key export markets included the USA, China, Japan and CLMV Group.

### Outlook of Ceramic Industry in Q4/2021

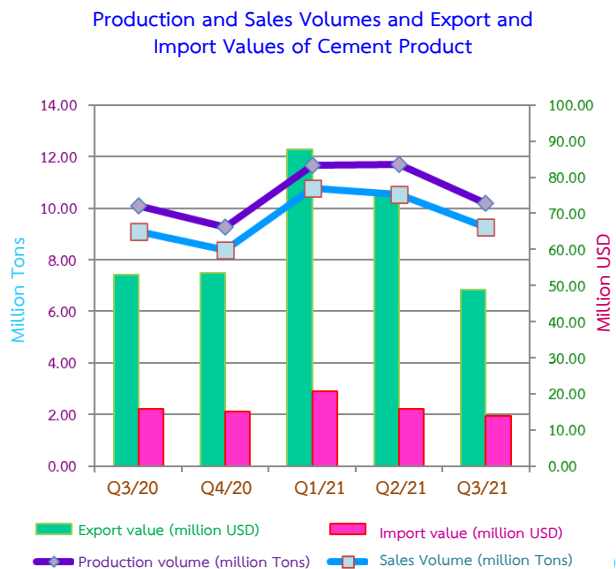
Domestic production and distribution of ceramic in Q4/2021 is anticipated to expand by needs of domestic market from the economic boost-up measure and sales promotion to stimulate markets after the flood crisis in various areas nationwide. With the announcement of the country reopening for foreign tourists from 1<sup>st</sup> November 2021, the economic activities are more as well as the production to support the key export markets like the USA, China and Japan after the outbreak situation becomes better.

### Government Policy about Ceramic Industry

Department of Primary industries and Mines announces properties and characteristics of shale and rhyolite for ceramic industry because such stones are utilized in ceramic factories with higher trade value than other stones, which can promote worthwhile use of natural resources for higher effectiveness in a balanced and sustainable manner.

## Cement Industry

Cement industry in Q3/2021, compared with the same quarter of previous year, had decreased production and distribution due to flooding in many areas during the raining season. The export value declined because the main markets were economically affected by the outbreak of the COVID-19.



Source: 1. The volumes of production and domestic Sales: Division of Information and Industrial Economic Indices

2. The export value: Information and Communication Technology Center, Office of the Permanent Secretary of Ministry of Commerce

**Production:** (excluding clinker) In Q3/2021 was 10.20 million tons, decreasing from Q2/2021 for 12.94 percent (%QoQ) and from the same quarter in previous year for 7.20 percent (%YoY).

**Domestic sales:** (excluding clinker) In Q3/2021 was 9.26 million tons, declining from Q2/2021 for 12.27 percent and from the same quarter in previous year for 7.54 percent (%YoY).

**Export-import of cement:** (excluding clinker) In Q3/2021 was valued at 48.89 million USD for the export, decreasing by 35.25 percent (% QoQ), compared with Q2/2021 and the same quarter in the previous year for 7.67 percent. It was the decline from markets of Myanmar and Cambodia for 41.10 percent and 26.72 percent because of the main markets being affected by the outbreak.

### Outlook of Cement Industry in Q4/2021

The cement industry (excluding clinker) in Q4/2021, when compared with the same quarter of the previous year, is anticipated to have production and distribution expansion due to numerous positive factors. For example, after the rain season and flooding in different areas, affected people need to repair their houses, and there are government projects to be operated. Furthermore, the Bank of Thailand has an easement of LTV-loan to value temporarily the loan ceiling at 70-95 percent from 100 percent contractual sale and purchase price from 21<sup>st</sup> October 2021 - 31<sup>st</sup> December 2022, which will boost the need for the purchase of real estate.

### The Government Policy about the Cement Industry

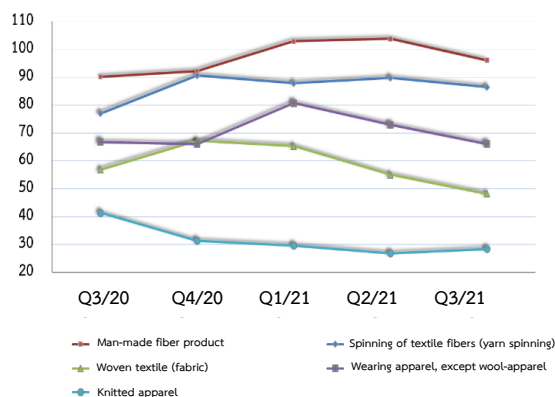
The government applies an economic boost-up and investment measure to draw high-potential foreigners to enter Thailand under the approval of the cabinet on 14<sup>th</sup> September 2021. The potential foreigners can invest in 3 sectors including real estate, with emphasis on boosting domestic purchasing power.



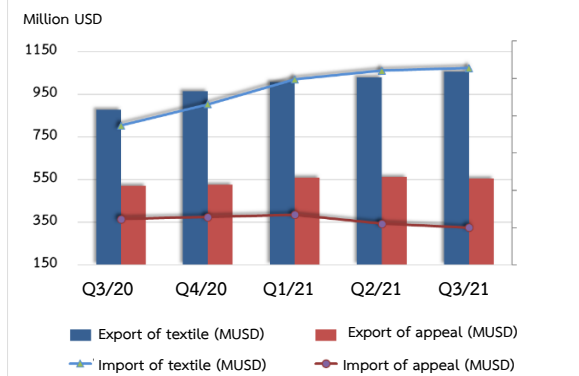
## Textile and Apparel Industry

In Q3/2021, the economy of the textile industry grew, when compared with the same period of the previous year, due to low base and recovery of essential market like the USA, China and the EU. Meanwhile, in the clothing group, the production decreased from purchasing power in the country despite better situation of export markets.

MPI of Textile and Apparel



Export-Import Value of Textile and Apparel



**Domestic production and distribution:** The manufacturing production index of textile expanded by 9.43 (%YoY) with main factors of low-baseline in the previous year as a result of the outbreak of COVID-19 and the recovery of key trade partners. Meanwhile, the cloth and apparel have decreased MPI by 15.31 percent and 2.20 percent (%YoY) respectively, from the slowdown of domestic consumption although the export of clothes surged in key markets like China, the USA, the UK, and the EU. However, when compared with Q2/2021, the production of textile declined by 5.55 percent (%QoQ) especially for natural fibers, while the cloth and apparel had contraction for 12.50 percent and 9.01 percent (%QoQ) because of the latest wave of the epidemic. The domestic distribution of textile, cloth and apparel expanded by 8.24 percent, 6.50 percent, and 5.50 percent (%YoY) from the low-baseline in the previous year due to the outbreak, and need for raw materials to export to markets of China, the USA, the UK and the EU.

**Export-Import:** The export of textile and apparel generally recovered in the entire supply chain with the value of 1,611.50 million USD, expanding by 15.10 percent (%YoY), when considered by product groups, the textile group's value was 1,055.54 million USD, increasing by 20.05 percent, and apparel group with the value of 555.96 million USD, expanding by 6.75 percent due to the low-baseline in the previous year from impacts of the outbreak. However, since the outbreak situation improved in key trade partners after high rates of vaccination, many economic activities turn to normal, and the export grew in important markets like the USA, the UK, the EU and China.

The import of textile and apparel generally was valued of 1,257.58 million USD, increasing by 26.61 percent (%YoY) in the thread, fiber and cloth group. Partly, it was because of production for export by purchase orders along with the low-baseline in previous year. For ready-to-wear clothes, they had slowdown from purchasing power of consumers in the country because of the outbreak of the COVID-19 and lockdown measure.

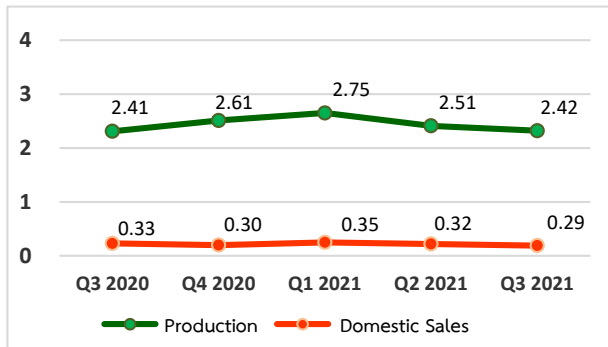
### Outlook of Textile and Apparel Industry in Q4/2021

The textile industry will expand continuously with the low-baseline in previous year along with incoming of purchase orders from foreign countries in the entire supply chain. Meanwhile, the apparel industry has less slowdown from the reopening policy that boosts domestic consumption. Furthermore, key trade partners like China, the USA and Europe recover. However, it is necessary to follow up problems of energy shortage in China leading to higher prices of raw materials like thread and polyester fiber, and shortage, which affects the production of clothes and uniforms. The entrepreneurs need to postpone the production while there are few advance orders because of uncertainty about delivery time.

## Wood and Wooden Furniture Industry

Compared with the same quarter of the previous year, the production of wooden furniture in Q3/2021 increased from the production to meet the need of foreign markets. Meanwhile, the distribution of wooden furniture in the country declined while the export of wood and wooden products had increased value from the recovery of the world economy and national economy of countries that were key export markets of the wood and wooden furniture industry.

Volumes of Production and Domestic Sales of Wooden Furniture (Million Units)



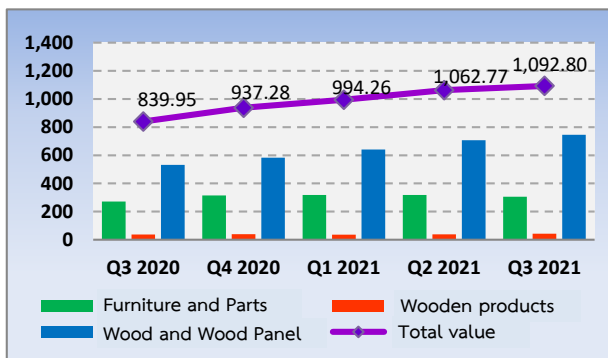
Source: The Office of Industrial Economics

**Production:** In Q3/2021, it was valued at 2.42 million pieces, decreasing from the previous quarter by 3.59 percent, compared with the same quarter of the previous year, it increased by 0.41 percent from the production to meet the needs of foreign markets.

**Domestic sales:** In Q3/2021 was valued at 0.29 million USD, declining by 9.38 percent and 12.12 percent from the previous quarter and the same quarter of the previous year, respectively. It resulted from the COVID-19 outbreak control measures leading to the contraction of the domestic economy.

**Export:** In Q3/2021, it was valued at 1,092.80 million USD, increasing by 2.83 percent and 30.10 percent from the previous quarter and the same quarter of the previous year, respectively. It was divided into furniture and parts, wooden products and wood and wooden sheets with the value of 305.16, 42.27, and 745.37 million USD, respectively. When compared with the same quarter of the previous year, the export value of furniture and parts increased by 12.56 percent, the export value of wooden products grew by 13.26 percent and the export value of wood and wooden sheets, expended by 40.23 percent. Overall, the export value of wood and wooden products increased in every group because of the recovery of the world economy and domestic economy of key export markets of Thailand's wood and wooden furniture industry.

Export Values of Wood and Wooden (Million USD)



Source: The Office of Permanent Secretary, Ministry of Commerce

### Outlook of Wood and Wooden Furniture Industry in Q4/2021

In Q4/2021, it is anticipated that the production of wooden furniture will expand continuously from the production that meets the need of domestic and foreign markets. For distribution of wooden furniture in the country, it will rebound and grow from the decrease of domestic outbreak.

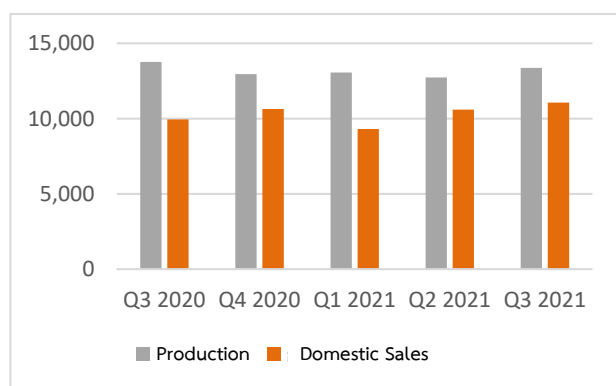
### The Government Policy about Wood and Wooden Furniture Industry

On 18<sup>th</sup> July 2021, the sustainable agriculture commission approved the Green Bank Project to promote cultivation of economic trees used as collaterals. It is to promote farmers and people to grow precious trees on their own land to increase properties and build up an assurance for their family. Furthermore, they can use such economic trees as a collateral for loan from financial institutions.

## Pharmaceutical Industry

The production of medicine in Q3/2021 slightly decreased from the same quarter of the same year in the entire quarter by the increasing demand of medicine. The export has slightly reduced as a result of ASEAN's market shrinkage especially in Vietnam and Myanmar.

Volumes of Production and Domestic Sales of Medicine (Tons)



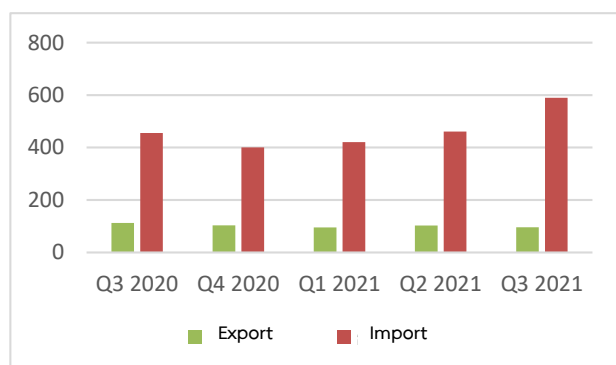
Source: The Office of Industrial Economics

**Production:** In Q3/2021, it was 13,372.97 tons, decreasing from the same quarter of the previous year by 2.83 percent. It was the reduction of tablet medicine and powder with production at 6.14 percent and 56.51 percent, respectively by the decrease of purchase orders.

**Sales:** In Q3/2021, it was 11,060.86 tons, rising from the same quarter of the previous year by 11.22 percent. It was the growth of distribution of tablet, liquid medicine, capsules, cream and powder medicine for 6.15, 10.69, 34.45, 21.62 and 34.33 percent, respectively. Overall, the domestic drug market had good expansion due to the outbreak of the COVID-19 making people alert and hoarding certain medicines.

**Export:** In Q3/2021, it was valued at 96.40 million USD, reducing from the same quarter of the previous year to 14.31 percent. It was the decrease in markets of Vietnam, Myanmar, the Philippines and Laos. The drug import was valued at 589.54 million USD, increasing from the same quarter in the previous year by 29.41 percent by importing drugs from India, Japan, France, Germany and the USA. The medicine was imported from India in this quarter and had increased in value by more than 132 percent, which is being closely reviewed because of potential impacts to the Thai entrepreneurs.

Export - Import Values of Medicine (Million USD)



Source: The Ministry of Commerce

### Outlook of Pharmaceutical Industry in Q4/2021

Medicine production in Q4/2021 is anticipated to expand from the same quarter in the previous year by 5.31 percent by the growth of domestic drug markets. Meanwhile, the export tends to decrease by 3.34 percent especially in markets of Vietnam, Myanmar, the Philippines and Laos that have less need of Thai medicines continued from the previous quarter.

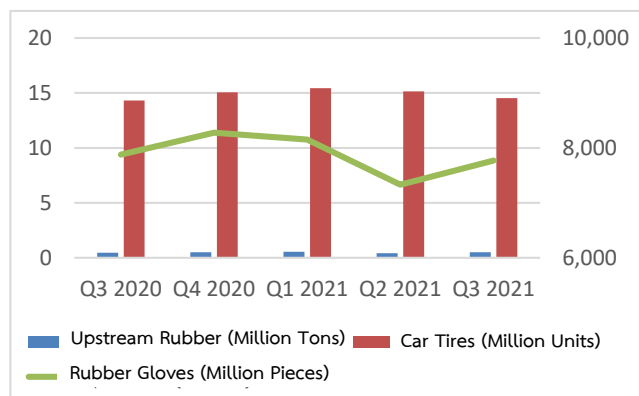
### The Government Policy about Pharmaceutical Industry

The Thailand government signed in the COVID-19 vaccine supply agreement for the advanced booking and a purchase agreement with AstraZeneca, a leading drug and biomaterial manufacturer by Siam Bioscience Co., Ltd, a large biomaterial and medicine manufacturer in Thailand, to transfer technology about the production of the COVID-19 vaccine from AstraZeneca and to manufacture such vaccines for marketplaces from June 2021. Therefore, Thailand became the first base of the COVID-19 vaccine production in Southeast Asia to strengthen personnel and do research and development in Thailand pharmaceutical industry which is a key to pushing Thailand to become a comprehensive medical hub of ASEAN.

## Rubber and Rubber Product Industry

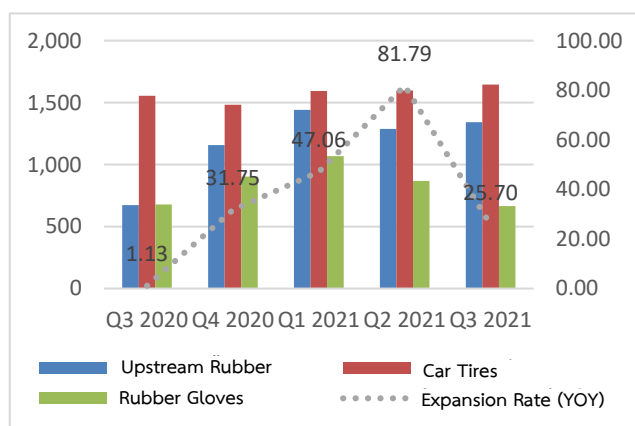
The volume of car tire production in Q3/2021 increased by expansion of foreign markets while the production of nitrile gloves decreased due to the outbreak of COVID-19 in factories and contraction of export markets. For primary processed rubber production, it surged from export to China.

**Volumes of the Production of Upstream Rubber, Car tire and Rubber Gloves Product Groups**



Source: The Office of Industrial Economics

**Values of the Export of Upstream Rubber, Car Tire and Rubber Gloves Product Groups (Million USD)**



Source: The Ministry of Commerce

**Production:** In Q3/2021, it was 0.50 million tons, 14.54 million bars and 7,771.03 pieces, when compared with the same quarter in the previous year. The production of primary processed rubber products and car tires expanded by 9.70 and 1.53 percent because of the expansion of foreign markets leading to more purchase orders. Meanwhile, the production of rubber gloves decreased by 1.36 percent from the outbreak of the COVID-19 in factories and the contraction of export markets.

**Sales:** In Q3/2021, it was 0.12 million tons, 10.60 million bars and 781.23 million pieces, when compared with the same quarter in previous year, the distribution of primary processed rubbers and car tires reduced by 4.42 percent and 1.88 percent, due to the decrease demand of the related industrial items. Meanwhile, the distribution of rubber gloves increased by 22.88 percent due to the growth of purchase orders.

**Exports:** In Q3/2021, it was valued at 1,341.84, 1,645.89 and 664.80 million USD, respectively. Compared with the same quarter in previous year, the export of primary processed rubbers and car tires increased for 99.49 percent and 5.84 percent, respectively, the export of rubber gloves declined for 1.95 percent.

### Outlook of Rubber and Rubber Product industry in Q4/2021

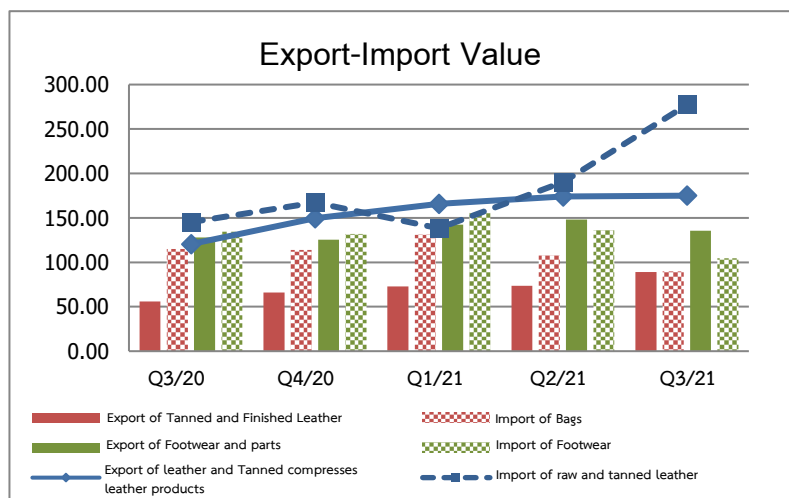
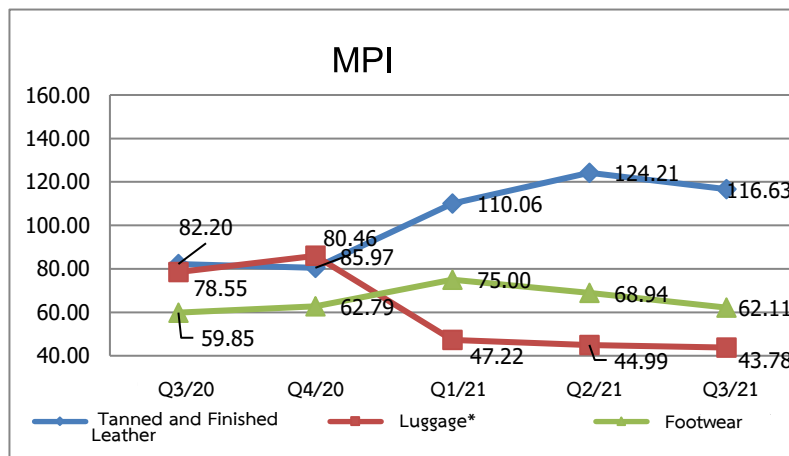
The production of car tires in Q4/2021 is anticipated to expand by 0.31 percent due to the increase of export markets. For rubber glove production, it is likely to decrease by 5.17 percent because there are more trade partners and Thailand cannot compete with the price. Regarding primary processed rubber production, it tends to rise by 5.00 percent by the need of primary processed rubber products in domestic and foreign markets.

## Footwear and Leather Product Industry

In Q3/2021, compared with the same quarter of the previous year, bleaching and decoration of leather and production of shoes expanded by the increasing need for export and domestic distribution. According to COVID-19 spreading around the world that expedite providing vaccine to the people. So, the consumers had less concern and started spending, which affected the overall economy.

### Production, Export and Import

(Million USD)



Source: 1. The MPI - the Office of Industrial Economics  
 2. The export-import value - the Ministry of Commerce  
 \* including handbags and similar items, saddles and harness  
 \*\*2021, increasing products and adjusting weight

**Production:** In Q3/2021, compared with the same quarter in the previous year, tanned and finished leather increased MPI by 41.16 percent while MPI of the footwear production increased by 3.77 percent and the luggage by 44.26 percent from the decrease of domestic distribution.

**Export-import:** Export in Q3/2021, compared with the same quarter in the previous year, was increasingly valuable for every product including finished leather products, tanned and pressed leather products, accessories for luggage and footwear, with an increase of 15.63, 43.4, and 5.93 percent, respectively. Many countries had a better situation of the COVID-19 outbreak and accelerated vaccination and people are more confident spending. The key export markets that increased were the USA, Denmark, Hong Kong and China.

The import, in Q3/2021, compared with the same quarter in the previous year, raw leather and tanned leather products were valued at 272.00 million USD, increasing by 62.80 percent, while the value of the luggage was 89.90 million USD, falling by 21.89 percent, and of the footwear was 104.60 million USD, declining by 22.17 percent, respectively.

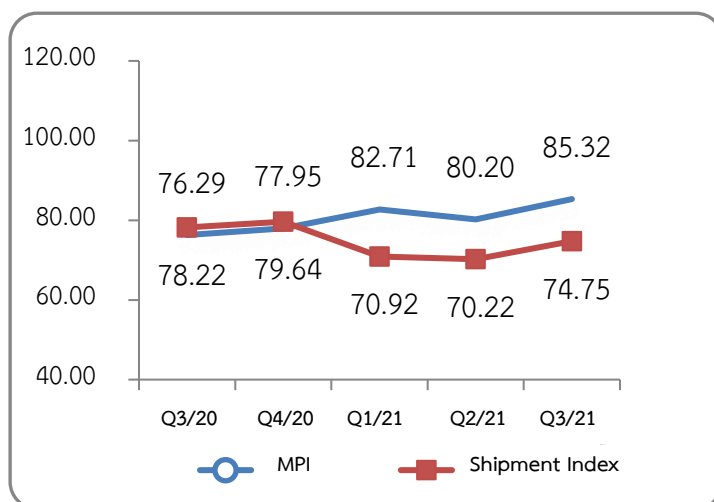
### Outlook of Footwear Leather Product Industry in Q4/2021

The production of leatherwork and footwear in Q4/2021, compared with the previous year, it is anticipated that the tanned and finished leather product will tend to be better, responding to the expansion of exports. Meanwhile, the production of bags and shoes is likely to decrease due to the contraction of domestic distribution. Compared with the same quarter in the previous year, the production of luggage and shoes will be slightly better. However, it is forecasted that the export situation tends to improve from the previous year due to a low-baseline and a better situation of the COVID-19 outbreak meaning that several countries can effectively manage with lockdown in some areas, leading to trivial movement of the economy and more confidence from the vaccination.

## Gems and Jewelry Industry

In Q3/2021, when compared with the same quarter of previous year, the production and distribution of jewels and ornaments generally increased from a higher rate of production for exports (excluded gold) from every country accelerating the COVID-19 vaccination leading to the improvement of the outbreak situation. In the country, the government had a measure to promote and support people continuously, which improved the jewel and ornament industry despite the new wave of the outbreak.

### Production, Sales and Export

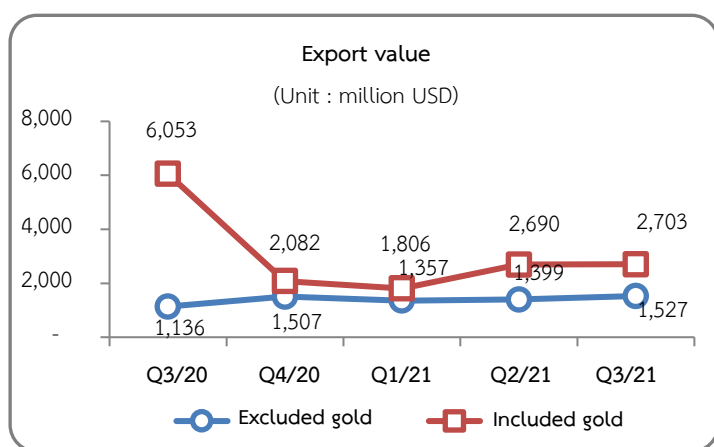


**Production:** In Q3/2021, compared with the same quarter in previous year (%YOY), it expanded by 3.94 percent due to the increase of production of every goods.

**Sales:** In Q3/2021, compared with the same quarter in previous year (%YOY), it decreased by 4.45 percent in categories of diamonds, precious stones and gems. The products that reduced included necklaces and pendants for 20.49 percent and 8.99 percent because of the outbreak of the COVID-19 which influenced the confidence of consumers.

**Export:** (excluding gold) In Q3/2021, compared with the same quarter in previous year (%YOY), total value at 1,527 million USD, increasing by 34.40 percent from the value of exporting diamonds, gems and authentic and artificial ornaments, that increased for 9.21, 84.21, 30.01, and 38.04 percent, respectively.

The key export markets were the USA, Hong Kong, Cambodia and India, but when considering the export of jewels and ornaments in overall, total value was 2,703 million USD, falling by 55.24 percent from unmolded gold export, that declined by 76.08 percent.



Sources: 1. The MPI and Shipment Index - the Office of Industrial Economics  
2. The export values - the Ministry of Commerce

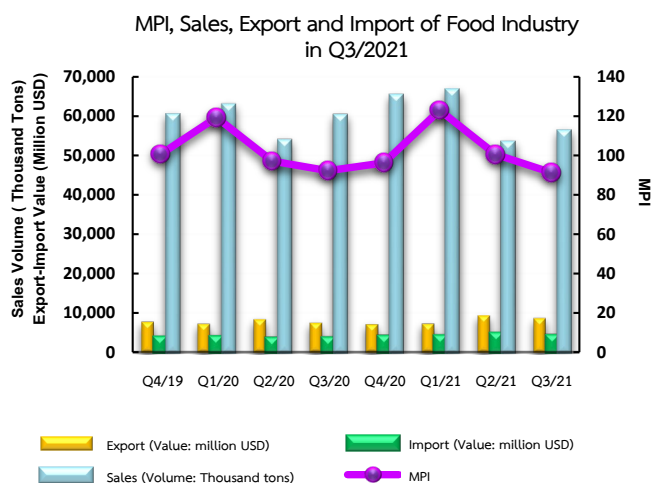
### Outlook of Gems and Jewelry Industry in Q4/2021

The production of gems and jewelry in Q4/2021 generally tends to decrease due to the outbreak of COVID-19 that continues to spread. However, according to the guideline of vaccination, it is likely that the 3<sup>rd</sup> dose will be taken to assure consumers and support measures that the government reopens the country in November, which possibly improves the domestic economy.

## Food Industry

MPI of Q3/2021 has decreased, compared with the same period in the previous year, due to the outbreak of the COVID-19 among laborers in food factories. As a result, some factories shut down temporarily or some production lines closed. The production index of food products that shrank included cooked chicken, frozen and chilled chicken, canned tuna, virgin palm oil, other canned fruits and canned corn. The expanded export value included vegetable and animal fat and oil, tapioca products, fresh, chilled, canned, frozen and processed vegetables, fruit, fodders and rice.

### MPI, Sales, Export and Import of Food Industry



Sources: The MPIs and sales volumes are collected from Office of Industrial Economics (OIE). The export and import values are collected from Ministry of Commerce, with the categorization by OIE.

**MPI:** In Q3/2021, it was 91.3, reducing by 1.0 percent (%YoY) compared with the same quarter in the previous year. The food products with decreased productivity included livestock, with 5.1 percent decreasing from important products of cooked chicken which is falling by 26.1 percent, frozen and cooled chicken by 8.2 percent, followed by fishery which declined by 7.5 percent from the products of canned tuna, decreasing by 21.5 percent due to the COVID-19 outbreak among workers in the food factory leading to temporary closure of some factories or production lines, palm oil by 4.7 percent from the products of virgin palm oil, contracting by 12.2 percent because of the decrease of palm raw material and processed vegetables and fruits, that fell by 2.2 percent from the products of other canned fruits, with contraction at 41.4 percent and canned sweet corn, by 32.5 percent.

**Domestic Sales:** In Q3/2021, it was 56,070.37 thousand of ton, decreasing by 6.6 percent (%YoY) compared with the same quarter in previous year. The products with less consumption included processed vegetables and fruits, declined by 23.1 percent from other canned fruits, canned sweet corn and frozen vegetables and fruits, followed by palm oil which declined by 17.1 percent from virgin palm oil and crude palm oil. Livestock with declined by 11.8 percent from cooked chicken, frozen and chilled chicken, for fishery declined by 8.6 percent from canned tuna.

**Export:** In Q3/2021 was valued at 8,434.6 million USD, expanding by 15.6 (%YoY), compared with the same quarter of previous year from key products of vegetable and animal fat and oil due to India reducing import duty for palm oil to decrease the cost of living for consumers from the price of domestic palm oil that becomes continuously higher. Furthermore, Malaysia and Indonesia as a major manufacturer and exporter, were affected by the shortage of labors in the production sector. It is followed by tapioca products that are highly needed in important markets like China, Japan and Taiwan as a raw material in food, fodder and ethanol industries, fresh, frozen, cooled canned and processed fruits and vegetables. The product quality has been accepted according to the world standard of animal food. Animal food market tends to grow continuously by popularity of petting all over the world, also including the depreciation of Thai Baht and rice. The price of rice is getting lower to compete with India and Vietnam.

**Import:** In Q3/2021, it was valued at 4,210.54 million USD, expanding by 15.2 percent (%YoY) compared with the same quarter of previous year, from the import of oil vegetable leftovers to support the fodder industry, followed by oilseeds to support the vegetable oil industry and flour products to support the ongoing industry especially for instant noodles.

#### Outlook of Food Industry in Q4/2021

It is anticipated that the overall manufacturing production index and export value will slightly increase compared with the same quarter in previous year because of the world economy and trade that tends to incessantly increase. Furthermore, there are positive factors from depreciation of Thai Baht, easement of lockdown measures in the nation and reopening to accept foreign tourists from 1<sup>st</sup> November 2021 to boost up spending. However, the situation of production and export is still at risk from the new wave of the COVID-19 outbreak which will affect the production sector and decrease purchasing power of consumers.

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• Electrical Appliance Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Electronics Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Automotive and Parts Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Motorcycle and Parts Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Chemical Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Plastics Industry	Division of Industrial Policy by Sector 1	0-2430-6804
• Petrochemical Industry	Division of Industrial Policy by Sector 1	0-2430-6804
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• Ceramics Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Cement Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Textile and Garment Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Wood and Wooden Furniture Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Pharmaceutical Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Rubber and Rubber Products Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Footwear and Leather Products Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Gems and Jewelry Industry	Division of Industrial Policy by Sector 2	0-2430-6805
• Food Industry	Division of Industrial Policy by Sector 2	0-2430-6805

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**Division of Industrial Policy by Sector 1**

**Division of Industrial Policy by Sector 2**