



Report on the Industrial Economics Status
in Q4/2022 and Outlook for Q1/2023



สำนักงาน | OFFICE
เศรษฐกิจอุตสาหกรรม | OF INDUSTRIAL ECONOMICS

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Executive Summary

Summary of Thai Industrial Economic Status in Q4/2022

The industrial economic status in Q4/2022, when considered from the Manufacturing Production Index (MPI), contracted by 5.8 percent from Q3/2022, which grew by 8.1 percent. The contraction was partly due to the drop-in export production in many industries as the global economy slowed down faster and stronger than expected. However, industries focusing on the domestic market, including tourism-related ones, have expanded well. Nonetheless, some key industries that contracted in Q4/2022 include **Hard Disk Drive**, as the manufacturers gradually discontinued products with declining global demand. In addition, the demand for computer products and storage devices continued to decrease. **Petroleum refining** was also affected due to factory maintenance shutdowns in some refineries in October and November 2022. **Plastic pellets** were also affected due to factory maintenance shutdowns in the basic petrochemical production plant and delayed production for inventory disposal, partially due to reduced demand in the global market. **Industries that expanded well in Q4/2022** included **the automobile**, which increased exports for all types of cars, and **palm oil**, due to increased demand in various industries, such as biodiesel and food, in line with the economic recovery. Moreover, palm oil production this year has been high.

Key Industries Outlook for Q1/2023

↓ Iron and Steel: Production is expected to contract slightly compared to the same period last year due to rising energy costs. This may result in rising steel prices in the world market and cause the demand for steel to slow down. However, if the infrastructure construction and the government's industrial support policies continue, it is expected to support the growth of the domestic iron and steel industry.

↓ Electronics: The Manufacturing Production Index (MPI) is expected to contract by about 3.0 percent due to the continuous rise in energy prices. As a result, entrepreneurs will have to bear the burden of increasing production costs which may affect the overall production and profitability of the manufacturing sector. Additionally, a shortage of raw materials used in the production of semiconductor chips, and electronic components is also expected to negatively impact the ability of manufacturers to produce enough to meet the high demand for electronic products in the global market.

↔ Automobile: In Q1/2023, more than 490,000 automobiles will be manufactured, with 50-55 percent for domestic sales and 45-50 percent for export.

↔ Motorcycle: In Q1/2023, more than 525,000 motorcycles will be manufactured, with 80-85 percent for domestic sales and 15-20 percent for export.

↑ Pulp, Paper, and Print Media: Paper and paper products used in the production of packaging boxes are expected to increase following domestic consumption and usage for online shopping. Pulp is expected to return to positive growth after China gradually opens the country.

↑ Textiles and wearing apparel: The production of textiles and wearing apparel is expected to grow from domestic demand due to the recovery of the tourism sector and government measures to stimulate the economy. Additionally, the announcement of China's reopening will be a good signal for exports. However, there are still risks from fragile consumer purchasing power, high costs of living, and fluctuations in raw material and energy prices.

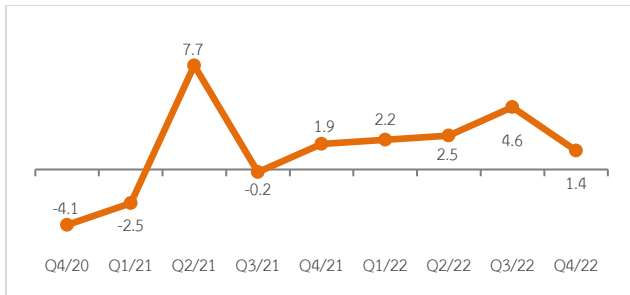
↔ Rubber and Rubber Products: Production of processed rubber in primary forms and automotive tires are expected to grow from production to meet the needs of both domestic and international markets. Nonetheless, the production of rubber gloves is expected to slow down as demand for rubber gloves in the global market drop continuously. This coupled with high base effect of production in Q1/2023.

↓ Food: The overall MPI and export value are expected to contract slightly compared to the same quarter of the previous year due to the global economic slowdown and the economies of major trading partners. As a result, the demand for products is projected to decrease. This is coupled with higher production costs due to fluctuating energy prices and Thai Baht, which may affect Thailand's export sector, including from the high base effect of the same quarter last year from economic growth after the relief of the COVID-19s. However, domestic demand is expected to improve in the tourism sector.

Part 1 Thailand Economic and Industrial Overview for Q4/2022

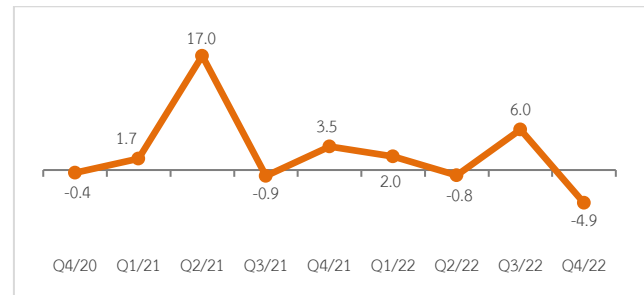
Thailand's Economic and Industrial Overview for Q4/2022

Gross domestic product
increased by 1.4 percent (%YoY)



Source: Office of the National Economic and Social Development Council

Industrial sector GDP
decreased by 4.9 percent (%YoY)



Source: Office of the National Economic and Social Development Council

Gross domestic product or GDP in Q4/2022 was at 1.4 percent, decreasing from the previous quarter (4.6%) and decreasing from the same period last year (1.9%).

The GDP of the industrial sector contracted by 4.9 percent, a decrease from the previous quarter (6.0%) and contracted from the same period last year (3.5%).

Key factors of GDP growth



Agricultural production increased by 3.6 percent.



The service sector decreased by 4.9 percent.



Private consumption and expenditure increased by 4.2 percent.



Total investment increased by 5.7 percent.



Industrial production increased by 3.9 percent.



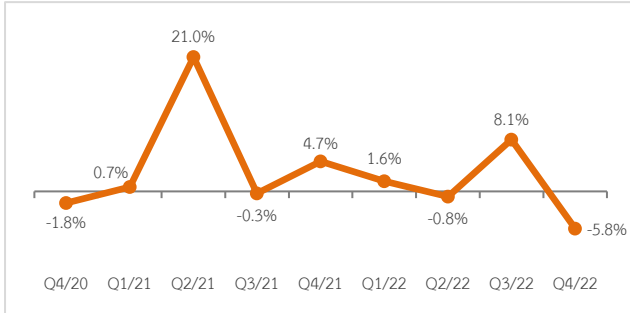
Exports of goods and services decreased by 0.7 percent.

The GDP in Q4/2022 contracted from the previous quarter as trading partner economies slowed down faster than expected. As a result, products for export decreased, such as machinery and equipment, chemicals, automotive parts and equipment, passenger cars, pickup trucks, etc., including a decrease in oil production due to some oil refineries having major annual maintenance shutdowns.

Key Industrial Index

Manufacturing Production Index

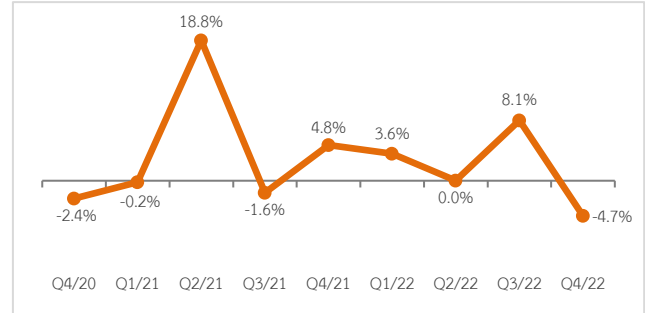
decreased by 5.8 percent (%YoY)



Source: The Office of Industrial Economics

Shipment Index

decreased by 4.7 percent (%YoY)



Source: The Office of Industrial Economics

In Q4/2022, the Manufacturing Production Index (MPI) stood at 94.39 points, a decrease of 3.44 percent from the previous quarter (97.75 points) and a decrease of 5.77 percent from the same quarter last year (100.17 points).

Industries contributing to the increase of the MPI from the previous quarter were the manufacture of refined petroleum products, plastics and synthetic rubber in primary forms, fertilizers, and nitrogen compounds, for example.

Industries contributing to the decrease of the MPI from the same quarter last year were the manufacture of computers and peripheral equipment, refined petroleum products, and plastics and synthetic rubber in primary forms, for example.

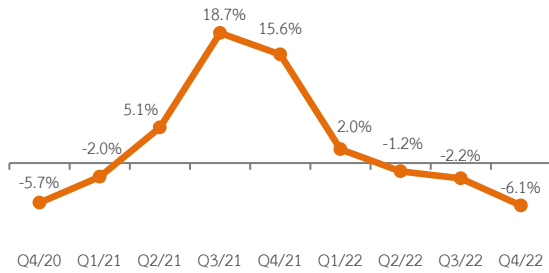
In Q4/2022, the Shipment Index stood at 97.19 points, a decrease of 2.58 percent from last quarter (99.77 points) and a decrease of 4.69 percent from the same quarter last year (101.98 points).

Industries that contributed to the increase of the Shipment Index from last quarter were the manufacture of refined petroleum products, plastics and synthetic rubber in primary forms, and computer and peripheral equipment, for example.

Industries that contributed to the decrease of the Shipment Index from the same quarter last year were the manufacture of computers and peripheral equipment, plastics and synthetic rubber in primary forms, and refined petroleum products, for example.

Finished Goods Inventory Index

decreased by 6.1 percent. (%YoY)



Source: The Office of Industrial Economics

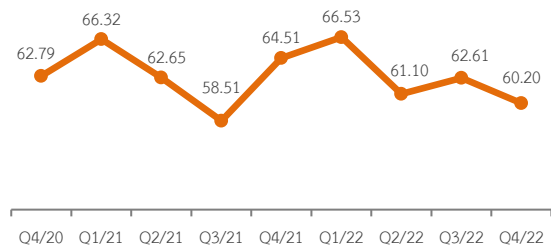
In Q4/2022, the finished goods inventory index stood at 135.16 points, a decrease of 2.98 percent from the previous quarter (139.31 points) and a decrease of 6.14 percent from the same quarter last year (144.00 points).

Industries that contributing to the decrease of finished goods inventory index from the previous quarter were the manufacture of computers and peripheral equipment, sugar, basic iron and steel, for example.

As for industries contributing to the decrease of the finished goods inventory index from the same quarter last year (2021) were the manufacture of computers and peripheral equipment, other rubber products, and household utensils, for example.

Capacity Utilization Rate

stood at 60.20 percent.



Source: The Office of Industrial Economics

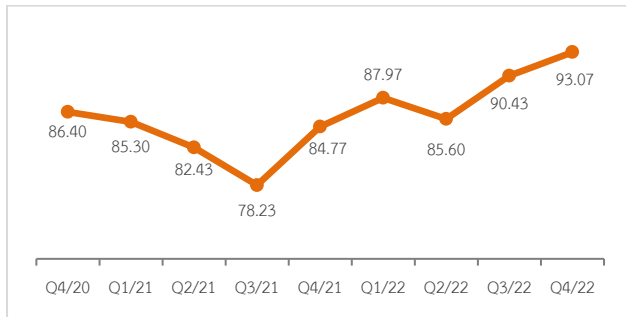
In Q4/2022, the capacity utilization rate stood at 60.20 percent, decreasing from the previous quarter (62.61%) and from the same quarter last year (64.51%).

Industries that contributed to the decrease of capacity utilization rate from the previous quarter were the manufacture of refined petroleum products, plastics and synthetic rubber in primary forms, and electronic components and boards, for example.

Industries that contributed to the decrease in capacity utilization rate from the same quarter last year (2021) were the manufacture of refined petroleum products, computers and peripheral equipment, and plastics and synthetic rubber in primary forms, for example.

Industrial Sentiment Index

in Q4 stood at 93.07 points.



Source: The Federation of Thai Industries

In Q4/2022, the industry sentiment index was 93.07 points, increasing from last quarter (90.43 points). Meanwhile, the three-month forecast for the sentiment index was at 98.57 points, decreasing from the same quarter last year (100.00 points).

Factors contributing to the increase of industry sentiment index in the Q4/2022 were from the Ministry of Public Health's announcement of the cancellation of COVID-19 as a dangerous infectious disease designated as a contagious disease that must be monitored from October 1, 2022, onwards. The announcement was the start of the domestic economy's recovery. Additionally, the government issued measures to stimulate the economy and tourists in 2022 (11.8 million people), which increased from 2021 (0.4 million people) by 2,850 percent. Most tourists were from Asian countries, such as Malaysia, India, Lao PDR, Cambodia, and Singapore.

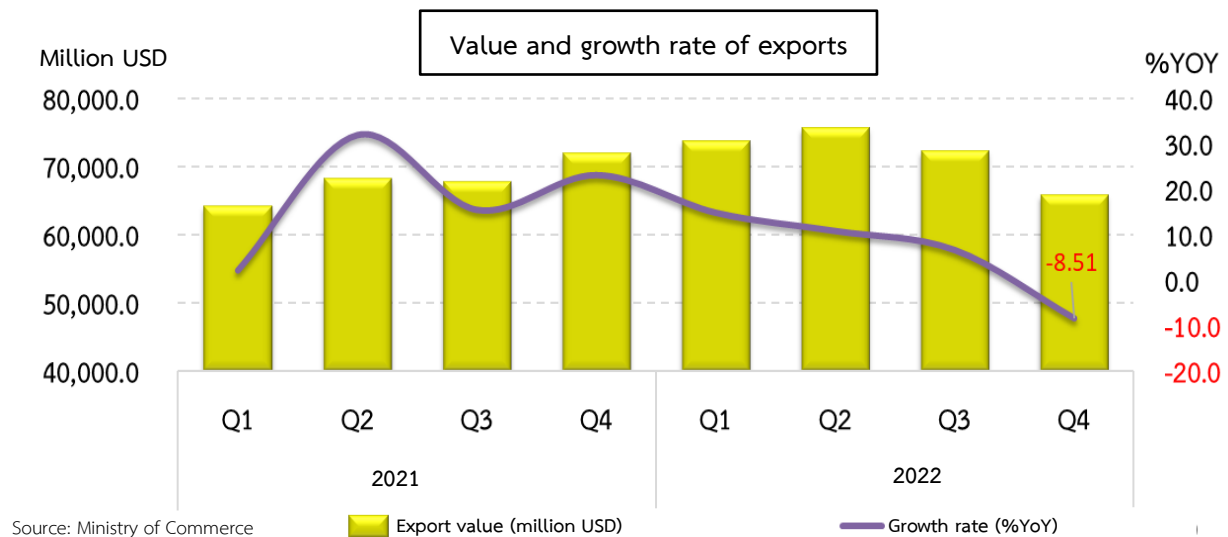
In addition, the manufacturing sector continued to grow as domestic consumption and chip shortages began to subside. However, operators were concerned about rising production costs from energy and electricity costs.

Foreign Trade

"Foreign trade in Q4/2022 contracted compared to the same period last year (%YoY) due to the global economic slowdown and China's shutdown, which weakened consumer purchasing power, particularly in Thailand's important export markets. As a result, Thailand's imports and exports contracted. However, industries that focused on the domestic market, including tourism-related ones, continued to expand well, such as automobiles, and oil refineries, with increasing growth."

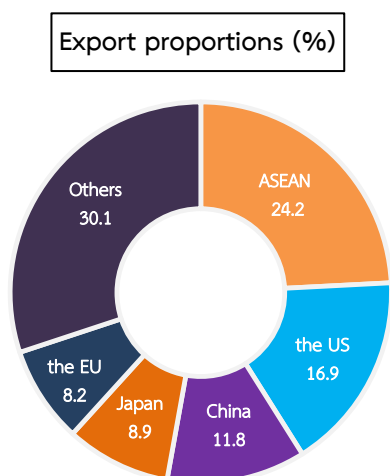
Thailand's international trade in Q4/2022 was valued at 134,571.00 million USD. The export value was 65,799.21 million USD, decreasing by 8.51 percent compared to the same period last year. The import value was 68,771.79 million USD, decreasing by 3.25 percent compared to the same period last year. The overall trade balance for Q4/2022 was in deficit of 2,972.58 million USD.

Export Structure



Thailand's exports in Q4/2022 were valued at 65,799.21 million USD, contracted by 8.51 percent compared to the same period last year (%YoY), with changes in the main product categories as follows: Agricultural products reached an export value of 5,942.32 million USD, contracting by 6.97 percent (%YoY); Industrial agricultural products reached an export value of 4,991.24 million USD, contracting by 4.04 percent (%YoY); Industrial products reached an export value of 52,524.57 million USD, contracting by 8.38 percent (%YoY); Minerals and fuels reached an export value of 2,341.07 million USD, contracting by 22.04 percent (%YoY).

Export Markets

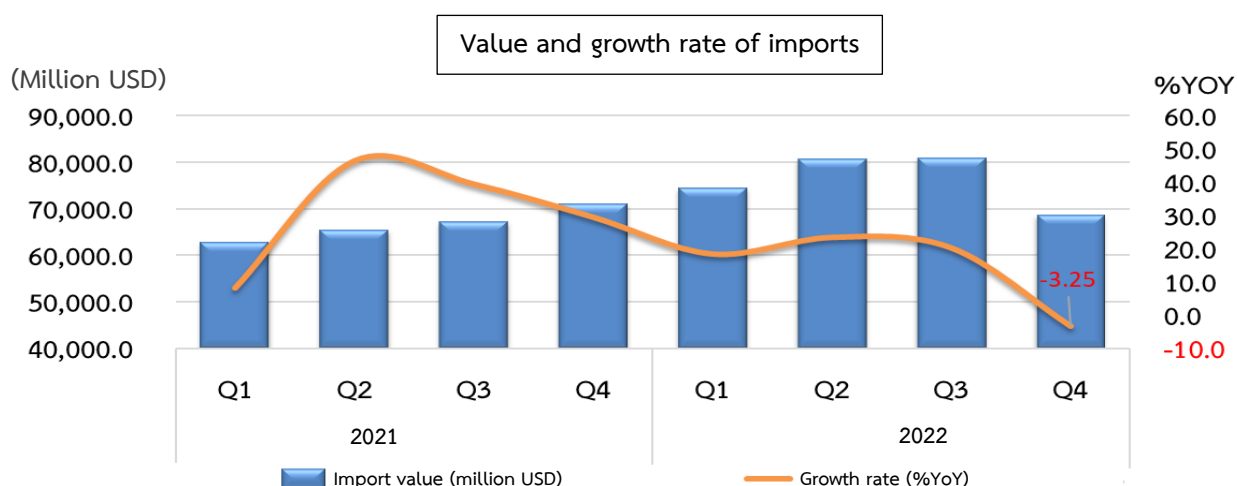


Source: Ministry of Commerce

In Q4/2022, 69.92 percent of Thailand's exports were to five main trading partner markets: ASEAN, the US, China, Japan, and the EU (27 countries). The remaining 30.08 percent of exports were to other markets. Export to all Thailand's key trading partners decreased compared to last year's period (%YoY) as follows:

- Thailand accounted for the value of exports to ASEAN, the US, China, Japan, and the EU (27 countries) at 24.21 percent, 16.87 percent, 11.81 percent, 8.85 percent and 8.18 percent, respectively.
- Thailand's exports decreased by 8.51 percent (%YoY), with a value of 65,799.21 million USD. Exports to China had the highest decrease at 13.37 percent, followed by ASEAN at 10.88 percent, Japan at 7.14 percent, the EU (27 countries) at 4.77 percent, and the US at 1.32 percent.

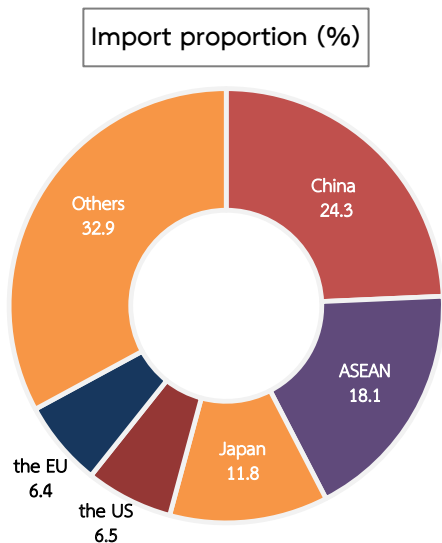
Import Structure



Source: Ministry of Commerce

In Q4/2022, Thailand's imports of goods reached a value of 68,771.79 million USD, decreasing by 3.25 percent (%YoY). Key product categories with changes in import were fuel products with an import value of 13,538.50 million USD, expanding by 8.33 percent (%YoY); capital goods with an import value of 15,700.28 million USD, decreasing by 8.50 percent (%YoY); raw materials and semi-finished goods with an import value of 27,336.64 million USD, decreasing by 6.81 percent (%YoY); consumer goods with an import value of 8,043.40 million USD, decreasing by 6.39 percent (%YoY); vehicles and transport equipment with an import value of 3,251.43 million USD, decreasing by 6.06 percent (%YoY); weapons, military supplies, and other goods with an import value of 901.54 million USD, increasing by 2,222.32 percent (%YoY).

Import markets



Source: Ministry of Commerce

In Q/2022, Thailand's main import partners, which include ASEAN, the US, China, Japan, and the EU (27 countries), accounted for 67.06 percent of the total imports, while imports from other markets accounted for 32.94 percent. The proportion of imports from Thailand's main partners decreased compared to the same period last year (%YoY), except for the US and ASEAN, which increased. The details are as follows:

- Thailand's imports from China, ASEAN, Japan, the US, and the EU (27 countries) accounted for 24.27 percent, 18.09 percent, 11.75 percent, 6.54 percent, and 6.41 percent, respectively.

- Thailand's imports decreased by 3.25 percent (%YoY), with a value of 68,771.79 million USD. Imports from Japan decreased the most by 8.62 percent, followed by China with a decrease of 6.58 percent and the EU (27 countries) with a decrease of 6.40 percent. Meanwhile, imports from the US increased by 18.18 percent, and imports from ASEAN increased by 2.97 percent.

Global Economy in Q4/2022

“The economic situation in Thailand's main trading partners slowed down compared to the previous quarter due to geopolitical conflicts in various regions, resulting in a scarcity of raw materials and increased fuel and food prices worldwide, causing inflationary pressure to remain high. This led to many central banks adopting stricter monetary policies. Additionally, the implementation of China's Zero-COVID policy adversely affected the economies of several countries. Despite this, the tourism industry continued to recover as international travel restrictions were relaxed in different parts of the world and the domestic pandemic situation improved.”

Summary of Key Economic Indicators in Q4/2022

Quarterly Growth (%YoY)

| | GDP | Inflation | MPI | Export | Import | Unemp. Rate | Policy Rate |
|-------------|-------|-----------|--------|---------|--------|-------------|--------------|
| the US | ↑ 1.0 | ↑ 7.1 | ↑ 2.4 | ↑ 9.0 | ↑ 3.1 | At 3.4 | At 4.25-4.50 |
| China | ↑ 2.9 | ↑ 1.8 | ↑ 2.8 | ↓ -6.9 | ↓ -6.7 | At 5.5 | At 3.65 |
| Japan | ↑ 0.6 | ↑ 3.9 | ↓ -0.2 | ↓ -4.6 | ↑ 7.6 | At 2.4 | At -0.10 |
| South Korea | ↑ 1.4 | ↑ 5.2 | ↓ -4.0 | ↓ -10.0 | ↑ 3.1 | At 2.6 | At 3.25 |
| Singapore | ↑ 2.1 | ↑ 6.6 | ↓ -2.7 | ↓ -4.4 | ↓ -1.7 | At 1.8 | n.a. |
| Thailand | ↑ 1.4 | ↑ 5.8 | ↓ -5.8 | ↓ -8.5 | ↓ -3.3 | At 1.2 | At 1.25 |

Source: ceicdata, <https://www.nesdc.go.th>, <https://tradingeconomics.com>

Note: n.a. = not available

Economic conditions in Thailand's major trading partners are expected to slow down from the previous quarter, following the slowdown in key economies, especially the US economy. This is due to a slowdown in domestic demand as the central bank continued to raise policy rates to reduce inflationary pressures, coupled with the slowdown in the Chinese economy due to the impact of the COVID-19 pandemic in the country that increased after the relaxation of control measures. The slowdown in the Chinese economy affected industrial production and the exports of goods to many countries in Asia. However, the recovery of the tourism sector after international travel resumed, especially the Chinese economy, which had a better recovery from measures to open the country faster than expected, is projected to support the economy in 2023 to recover.

Crude oil prices in the world market remained volatile. Crude oil prices dropped from the previous quarter but remained higher than in the same period last year. The increase in crude oil prices in the world market this quarter is due to (1) China, the world's largest oil consumer, relaxing COVID-19 control measures, resulting in increased oil demand. (2) The US dollar depreciation resulted in crude oil contracts traded in the US dollar currency being cheaper. (3) OPEC and its allies (OPEC Plus) agreed to cut output by 2 million barrels per day between November and December 2022, making it the largest production cut by OPEC since 2020, and (4) Oil-producing countries such as the US tried to increase oil supply but faced a situation where OPEC reduced its production capacity. Therefore, they were not able to increase production as needed. The US announced the release of oil from strategic reserves to help reduce the spike in oil prices.

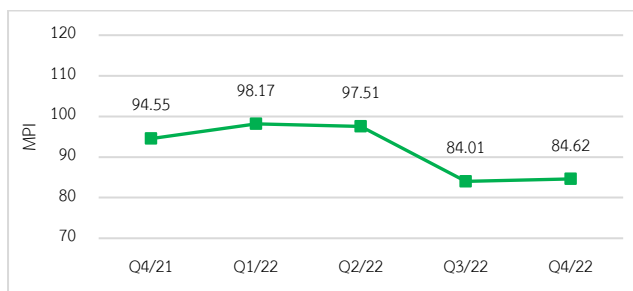
Issues that affect the global economy that need to be closely monitored include the global economic slowdown, pressure on exports and investment, higher inflation than the central bank's target range, the protracted energy crisis, and tight monetary policies worldwide. As a result, some major countries are at increased risk of recession. Geopolitical conflict situations in many areas have caused a shortage of raw materials in production. As a result, the manufacturing sector may slow down.

Part 2 Thai Industrial Economic Sectors in Q4/2022 and the
Outlook for Q1/2023

Iron and Steel Industry

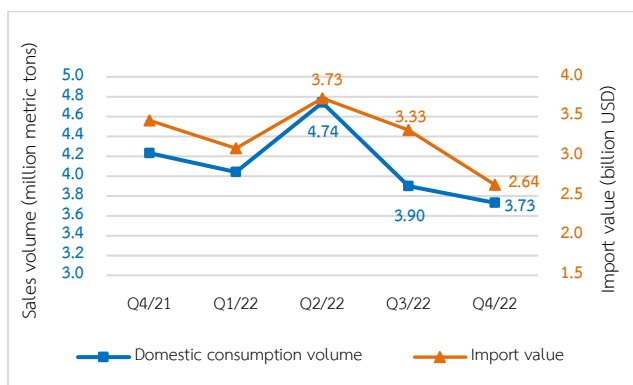
The iron and steel industry's MPI in Q4/2022 contracted compared to last year from the production of long and flat products such as round bars, hot-rolled structural steel sections, wires, cold-rolled sheets, and tin-plates.

Manufacturing Production Index (MPI)



Source: The Office of Industrial Economics

Domestic consumption and import value



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

Production: In Q4/2022, the industrial production index was 84.6, a decrease of 10.5 percent (%YoY) but an increase of 0.7 percent (%QoQ). Compared to the same quarter last year, production of flat products decreased by 13.2 percent. The product that decreased the most was cold-rolled sheets at 28.9 percent, followed by tinplates and galvanized sheets at 20.5 percent and 10.0 percent, respectively. Long production also decreased by 13.5 percent, with the highest contraction in round bars at 26.4 percent, followed by hot-rolled structural steel sections and wire at 20.2 percent and 16.0 percent, respectively.

Domestic consumption:

In Q4/2022, domestic consumption in Thailand reached 3.7 million metric tons, a decrease of 12.3 percent (%YoY) and 4.4 percent (%QoQ). Compared to the same quarter last year, consumption of flat products decreased by 16.6 percent, with tinplated products experiencing the largest decrease of 34.9 percent, followed by hot-rolled sheets (-19.4%), cold-rolled sheets (-17.6%), and galvanized sheets (-14.2%). Furthermore, the consumption of long products decreased by 4.5 percent from the consumption of wire rods (-13.1%) and rebars and hot-rolled structural steel sections (-1.3%).

Imports:

In Q4/2022 were valued at 2.6 billion USD, a decrease of 22.2 percent (%YoY) from the same quarter last year and a decrease of 20.8 percent (%QoQ) from the previous quarter. Compared to the same quarter last year, imports of flat products decreased by 26.2 percent. The product with the highest decrease in imports was electro-galvanized sheets (-64.6%), with key sources of imports being China, South Korea, Japan, and Taiwan. This was followed by tinplates (-55.7%) and cold-rolled carbon steel sheets (-37.1%). Imports of long products also decreased by 9.2 percent. Long product experiencing the highest decrease in imports was stainless steel wire rods (-52.3%), with key sources of imports being China, Malaysia, and South Korea. This was followed by structural alloy steel sections (-44.6%) and stainless-steel sections (-40.2%).

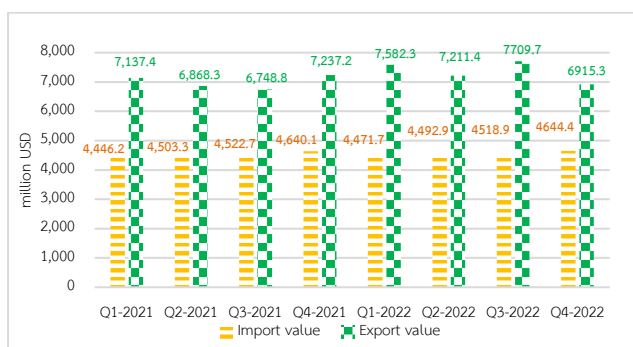
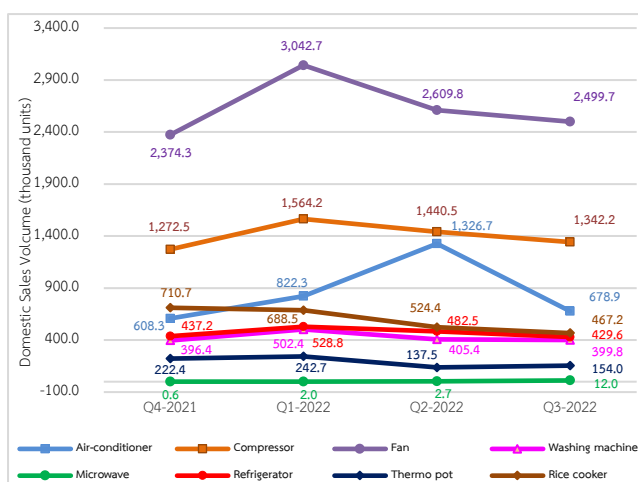
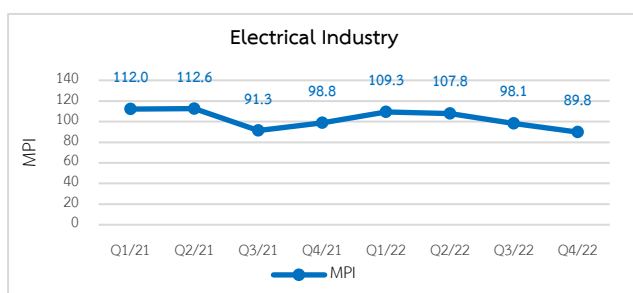
Iron and Steel Industry Outlook for Q1/2023

In Q1/2023, the iron and steel industry are expected to decreased slightly compared to the same period last year due to rising energy costs. This may result in rising steel prices in the world market and cause the demand for steel to slow down. However, if infrastructure construction and the government's industrial support policies continue, it is expected to support the expansion of the domestic iron industry.

Electrical appliance Industry

The production of electrical appliances in Q4/2022 decreased by 9.0 percent compared to the same quarter last year due to continuously rising energy prices. Products with reduced production included refrigerators, microwave ovens, electric motors, washing machines, household fans, cables, electrical wires, and air conditioners. Exports to China, Japan, and ASEAN markets decreased.

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



Source: The Office of Industrial Economics, Ministry of Commerce, and Electrical and Electronics Institute

Electrical Appliance Industry Outlook for Q1/2023

It is expected that the production index of the electrical appliance industry will expand by approximately 3.0 percent, while the value of exports is expected to expand by 5.0 percent due to the COVID-19 situation and the global economic recovery trend, which is positive for Thailand's main export market. This will result in the expansion of the electrical appliance industry, including the production of new models of electrical appliances that place greater importance on health, in order to alleviate the problem of PM 2.5 dust and prevent epidemics, especially air purifiers and air conditioners.

Production of electrical appliances: In Q4/2022, the MPI stood at 89.8, a decrease of 8.5 percent from the previous quarter (%QoQ) and a decrease of 9.0 percent compared to the same quarter last year (%YoY). Products with a decrease in production included refrigerators (-29.0%), microwave ovens (-23.1%), electric motors (-21.6%), washing machines (-15.0%), household fans (-14.6%), electrical cables (-14.5%), electrical wires (-3.1%), and air conditioners (-0.2%) due to the continuous increase in energy prices. In contrast, electrical appliances that increased in production were rice cookers (8.4%), compressors (6.9%), thermo pots (4.7%), and transformers (3.3%).

Domestic sales: In Q4/2022, domestic sales of certain products decreased compared to the same quarter last year. Products with a decrease in domestic sales included refrigerators (-19.5%), washing machines (-17.0%), thermo pots (-12.6%), electric motors (-7.2%), and fans (-1.7%). On the other hand, electrical appliances that increased in domestic sales were microwave ovens (871.4%), air conditioners (12.2%), rice cookers (11.4%), and compressors (1.2%).

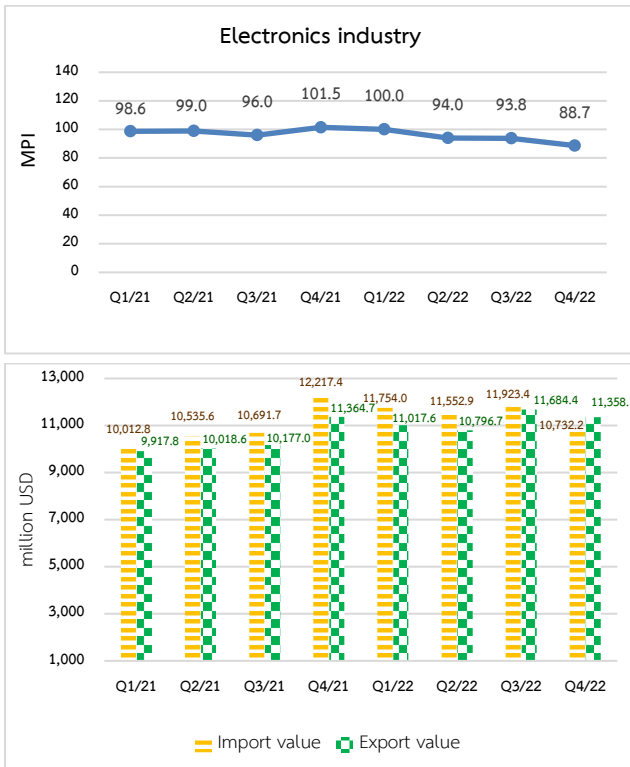
Imports of electrical appliances: In Q4/2022, imports were valued at 4,644.4 million USD, an increase of 2.8 percent from the previous quarter (%QoQ) and an increase of 0.1 percent from the same quarter last year (%YoY). Key products that increased in imports were rice cookers (21.5%), refrigerators (13.2%), and household fans (10.6%).

Exports of electrical appliances: In Q4/2022, exports were amounted to 6,915.3 million USD, a decline of 10.3 percent compared to the previous quarter (%QoQ) and a decrease of 4.4 percent from the same quarter last year (%YoY). The decline was mainly driven by lower demand from China, Japan, and ASEAN markets, which decreased by 9.3 percent, 7.0 percent, and 0.8 percent, respectively. Notably, refrigerators experienced the highest decline in exports (-31.4%), followed by electrical motors (-14.9%), washing machines (-14.8%), and compressors (-3.9%).

Electronics Industry

The production of electronic products in Q4/2022 decreased by 12.6 percent compared to the same quarter of the previous year due to a shortage of raw materials used in the production of semiconductor chips and electronic components, which resulted in insufficient production to meet the demand for electronic products in the global market. The products that experienced a decline in production include HDDs, Printed Wiring Boards (PWBs), printers, and semiconductor devices transistors. Additionally, their export values decreased in markets such as China, ASEAN, Europe, and Japan.

MPI, Import and Export Value of Electronics



Source: The Office of Industrial Economics, Ministry of Commerce, and Electrical and Electronics Institute

The electronics production in Q4/2022 reached an MPI of 88.7 points, a decrease of 5.4 percent from the previous quarter (%QoQ) and 12.6 percent from the same quarter last year (%YoY). Electronic products decreasing in production included HDDs (-45.0%), printed wiring boards (PWB) (-30.9%), printers (-13.7%) and semiconductor devices transistors (-8.0%).

Electronics Industry Outlook for Q1/2023

"The MPI of the electronics industry in Q4/2022 is expected to contract by about 3.0 percent as energy prices continue to rise, causing operators to bear the increasing production costs. This is coupled with the shortage of raw materials used in producing semiconductor chips and electronic components, making the industry unable to meet the world market demand for electronic products. Meanwhile, the export value will continue to grow by about 4.0 percent. Due to the global chip shortage and the relationship between the US, China, and Taiwan may affect the electronics industry's production supply chain, causing insufficient supply to meet global demand. In addition, inflationary pressures have caused the prices of raw materials used in the production of electronic products to increase."

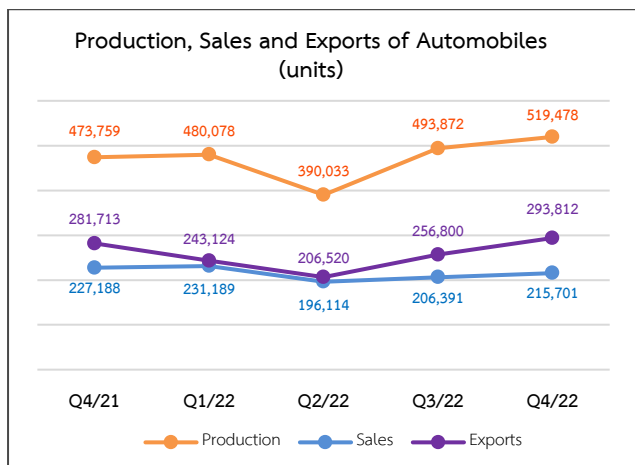
Meanwhile, electronic products with production growth included printed circuit boards (PCBA) (30.1%), integrated circuits (IC) (5.5%). The reason for the decrease in production of HDDs, Printed Wiring Boards (PWBs), printers, and semiconductor devices such as transistors was due to a shortage of raw materials used in the production of semiconductor chips and electronic components, which resulted in insufficient production to meet the demand for electronic products in the global market. However, electronic components are still necessary for developing 5G technology, data centers, and IT infrastructure products, which means there is still a continuous demand for electronic products in the global market.

Imports of electrical appliances in Q4/2022 were valued at 10,732.2 million USD, decreasing from the previous quarter by 10.0 percent (%QoQ) and decreasing from the same quarter last year by 12.2 percent (%YoY). Key products decreasing in import were computers (-42.8%), diodes (-35.7%), and semiconductor device transistors (-16.8%).

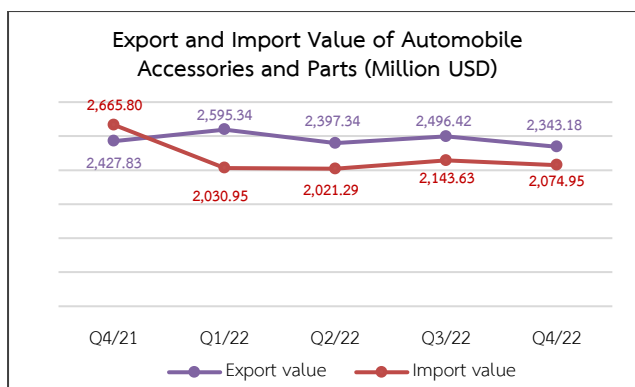
Exports of electrical appliances in Q4/2022 were valued at 11,684.4 million USD, a decrease of 2.8 percent from the previous quarter (%QoQ) and 0.1 percent (%YoY) from the same quarter last year. Exports to China, ASEAN, the EU markets, and Japan increased by 24.6 percent, 12.7 percent, 6.4 percent, and 5.4 percent, respectively. Key products decreasing in exports were diodes semiconductor device transistors and components (-55.9%), HDD (-40.2%), printed circuit boards (PCBA) (-16.2%), and printers, photocopiers, and components (-11.5%).

Automotive and Part Industry

In Q4/2022, the production of automobiles increased from the same period last year. This was mainly due to an increase in the export of all types of automobiles, including passenger cars and PPVs. However, the domestic market experienced a slowdown as there was already a high production volume in the previous year.



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



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

Automotive Industry Outlook for Q1/2023

According to the Office of Industrial Economics (OIE) forecast, in Q4/2022, over 490,000 units of automobiles will be manufactured. Of those, 50-55 percent will be for domestic sales, and 45-50 percent will be for exports.

Automotive Production

In Q4/2022, automotive production increased by 5.17 percent (%QoQ) from Q3/2022 to 519,478 units and increased by 9.65 percent (%YoY) from the same quarter last year. The production proportion consisted of passenger cars (35%), 1-ton pickup trucks and derivatives (63%), and other commercial vehicles (2%).

Domestic Sales of Automobiles

In Q4/2022, domestic sales increased by 4.51 percent (%QoQ) from Q3/2022 to 215,701 units but decreased by 5.06 percent (%YoY) from the same quarter last year.

Automotive Exports

In Q4/2022, automobile exports increased by 14.41 percent (%QoQ) from Q3/2022 to 293,812 units and increased by 4.29 percent (%YoY) from the same quarter last year. The export proportion consisted of passenger cars (33%), 1-ton pickup trucks (57%), and PPVs (10%).

Export Value of Automotive Parts and Accessories

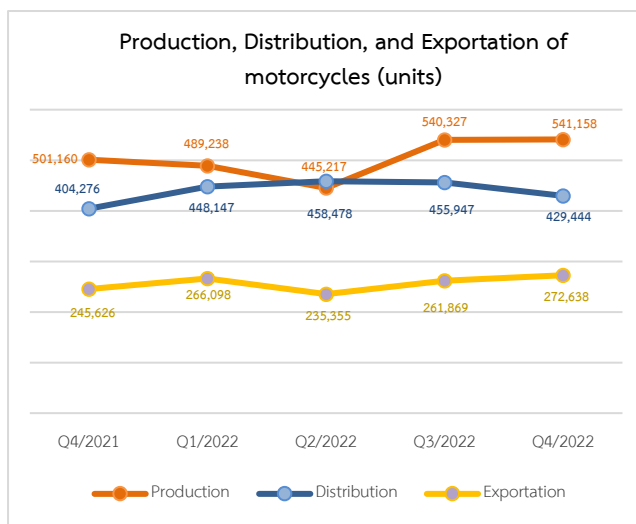
In Q4/2022, exports value decreased by 6.11 percent (%QoQ) from Q3/2022 to 2,343.81 million USD and decreased by 3.46 percent (%YoY) from the same quarter last year. Key export markets for automotive parts and accessories were the US, Japan, and Malaysia.

Import Value of Automotive Parts and Accessories

In Q4/2022, imports decreased by 3.20 percent (%QoQ) from Q3/2022 to 2,074.95 million USD and decreased by 22.16 percent (%YoY) from the same quarter last year. Key import markets for automotive parts and accessories were Japan, China, and the US.

Motorcycle and Part Industry

Compared to the same period last year, the production volume of motorcycles in Q4/2022 increased in domestic and export markets. The increase resulted from the government's economic stimulus measures, including the improvement of the agricultural production index and the demand from trading partners that continues to expand.



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

Motorcycle Production

In Q4/2022, production of motorcycles reached 541,158 units, increasing from Q3/2022 by 0.15 percent (%QoQ) and increasing from the same quarter last year by 7.98 percent (%YoY).

Domestic Sales of Motorcycles

In Q4/2022, domestic sales decreased by 5.81 percent (%QoQ) from Q3/2022 to 429,444 units but increased by 6.23 percent (%YoY) from the same quarter last year.

Motorcycle Exports

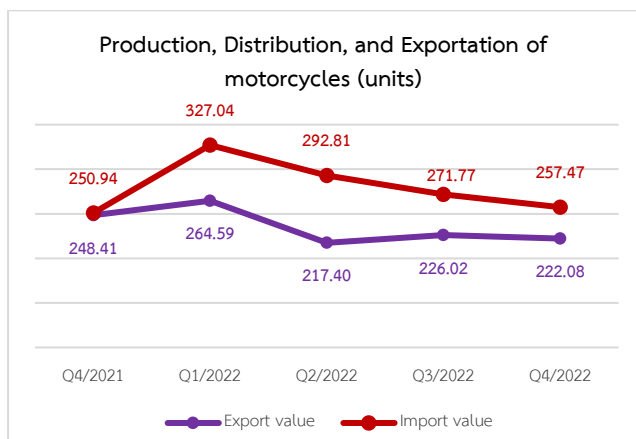
In Q4/2022, exports reached 272,638 units (exported as CBU 138,468 units and CKD 134,170 sets), an increase of 4.11 percent (%QoQ) from Q3/2022 and an increase of 11.00 percent (%YoY) from the same quarter last year.

Export Value of Motorcycle Parts

In Q4/2022, exports value decreased from Q3/2022 by 1.74 percent (%QoQ) to 222.08 million USD and decreased from the same quarter last year by 10.60 percent (%YoY). Key export markets were Cambodia, Brazil, and Japan.

Import Value of Motorcycles Parts and Accessories

In Q4/2022, imports of motorcycle parts and accessories decreased from Q3/2022 by 5.26 percent (%QoQ) to 257.47 million USD but increased by 2.60 percent (%YoY) from the same quarter last year. Key import markets of motorcycles parts and accessories were Japan, China, and the US.



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

Motorcycle Industry Outlook for Q1/2023

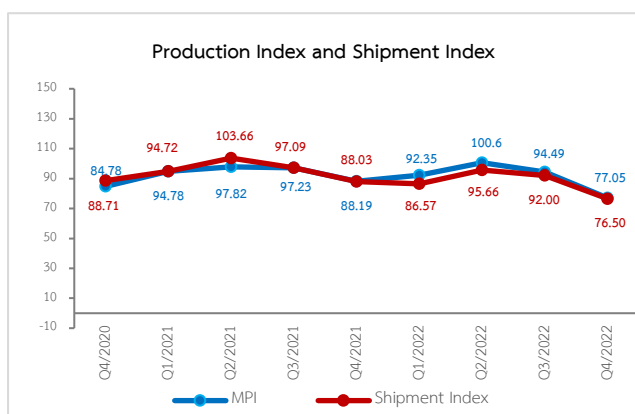
According to the Office of Industrial Economics (OIE) estimates, in Q1/2023, over 525,000 units of motorcycles will be manufactured. Of those, 80-85 percent will be for domestic sales, and 15-20 percent will be for exports.

Chemical Industry

In Q4/2022, the MPI of the chemical industry contracted compared to the same quarter of the previous year due to the global economy and the Thai economy slowing down, causing the demand for products to decrease. Exports and imports contracted due to the slowdown in foreign and domestic markets. Exports contracted in key markets such as India, Vietnam, Indonesia, and the US.

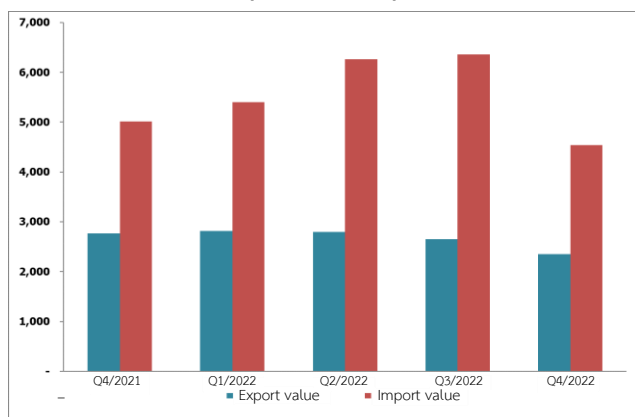
Marketing and sales

MPI and Shipment Index



Source: The Office of Industrial Economics

Export and import value of chemicals products (Million USD)



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

Manufacturing Production Index: In Q4/2022, the MPI was at 77.05 points, a decrease of 12.64 percent compared to the same quarter last year (%YoY) and a decreased of 18.71 percent compared to the previous quarter (%QoQ). Products that decreased in MPI were chemical fertilizers, oil paints, and hair shampoo, for example.

Shipment index: In Q4/2022, the shipment index decreased by 13.10 percent from the same quarter last year (%YoY) to 76.50 points and decreased by 17.02 percent compared to previous quarter (%QoQ). Products that decreased in shipment index were chemical fertilizers, oil paints, and hair shampoo.

Exports of chemicals: In Q4/2022, exports were valued at 2,355.03 million USD, decreasing by 14.99 percent compared to the same quarter last year (%YoY) and decreasing by 11.32 percent compared to the previous quarter (%QoQ). Key products contributing to the decreased in exports were chemical fertilizers, organic chemicals and inorganic chemicals.

Import of chemicals: In Q4/2022, imports were valued at 4,544.14 million USD, a decrease of 9.29 percent compared to the same quarter last year (%YoY) and a decrease of 28.56 percent from the previous quarter (%QoQ). Key products contributing to the decrease in import value were inorganic chemicals, organic chemicals, and chemical fertilizers.

Chemical Industry Outlook for Q1/2023

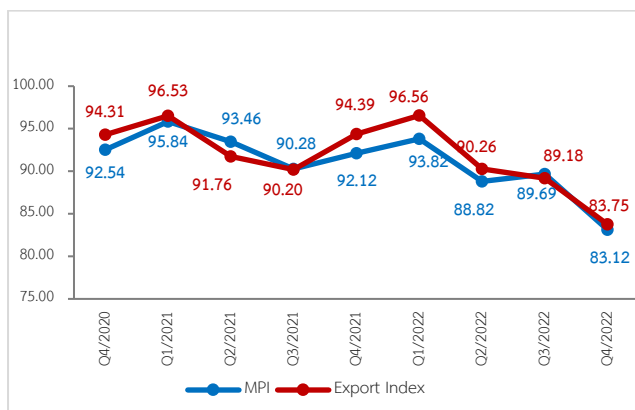
Chemical industry outlook for Q1/2023, the chemical industry anticipates a decline in chemical exports and imports compared to the same quarter of the preceding year due to an anticipated increase in crude oil prices, resulting in a rise in production costs. Petroleum-based products, including plastic pellets and chemical products, will likely decline, and entrepreneurs will slow their production and manufacture products based on orders only.

Plastics Industry

The plastics industry anticipates a decline in exports in Q4/2022 as key trading partners, including the US, Japan, Vietnam, and China, have shown reduced demand. The production has also contracted compared to the same period last year due to increased energy prices that have raised production costs. Several entrepreneurs have adopted a cautious approach by monitoring market trends and producing products based on consumer demand.

Production and Sales

MPI and Shipment Index



Source: The Office of Industrial Economics

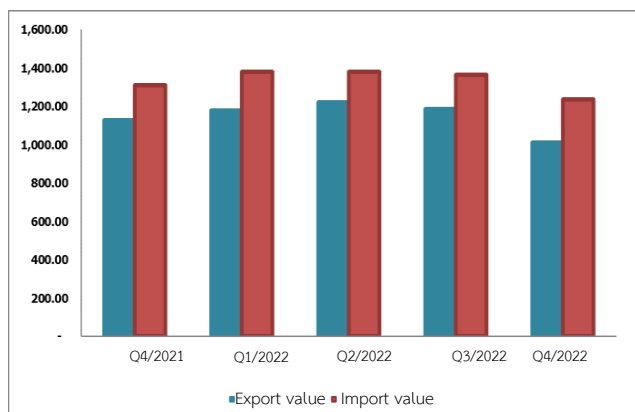
Manufacturing Production Index: In Q4/2022, the MPI stood at 83.12 points, decreasing by 9.78 percent compared to the same quarter last year (%YoY) and decreasing by 7.33 percent compared with the last quarter (%QoQ). Products with the most decrease in MPI included other plastic packaging, plastic sacks, and plastic films.

Shipment Index: In Q4/2022, the shipment index stood at 85.75 points, decreasing by 9.15 percent compared to the same quarter of the previous year (%YoY) and decreasing by 5.08 percent compared to the previous quarter (%QoQ). Products with the most decrease in shipment index included other plastic packaging, plastic sacks, plastic films.

Export Value: In Q4/2022, the value of exports amounted to 1,011.36 million USD, a decrease of 10.14 percent compared to the same quarter last year (%YoY) and a decrease of 14.69 percent compared with the last quarter (%QoQ). The product category with the most decrease in export value was other plates, sheets, film, foil and strip, of plastics, non-cellular (HS 3920), which contracted by 25.03 percent.

Import Value: In Q4/2022, the value of imports amounted to 1,234.13 million USD, a contraction of 5.69 percent compared to the same quarter of the previous year (%YoY) and a contraction of 9.36 percent compared to the previous quarter (%QoQ). The product category with the most decrease in imports was self-adhesive plates, sheets, film, foil, tape, strips, and other flat shapes made of plastics (HS 3919), which contracted by 18.25 percent.

Export and Import Volume (metric tons)



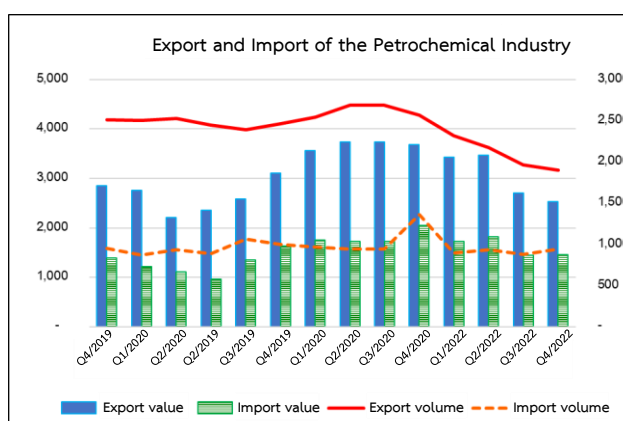
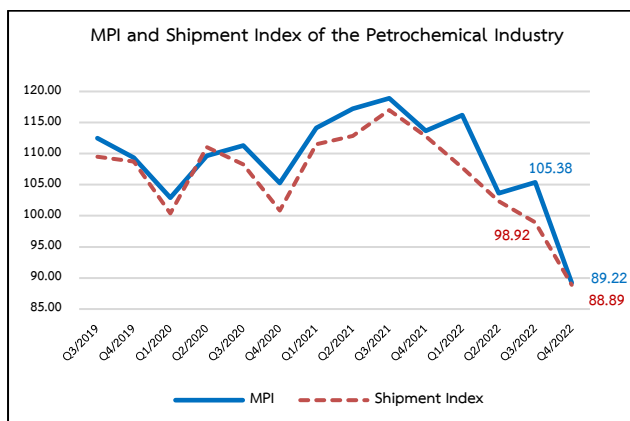
Source: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce in collaboration with Customs Department

Plastics Industry Outlook for Q1/2023

In Q1/2023, the plastics industry is expected to grow as more tourists travel to Thailand, causing the tourism industry to gradually recover, resulting in a recovery of plastic-related products. However, the volatility of global crude oil prices is expected to increase. As a result, the cost of raw materials used in producing plastic products will be higher.

Petrochemical Industry

The production and shipment index in the petrochemical industry in Q4/2022 decreased from the same quarter last year by 20.83 percent and 20.26 percent (%YoY). Imports increased by 0.45 percent compared to the previous quarter, and exports increased by 0.45 percent. Goods fell by 6.38 percent (%QoQ) due to rising fuel prices that affected global trade and transportation. Additionally, the appreciation of the US currency and global inflation resulted in a decline in production and petrochemical exports.



The Manufacturing Production Index (MPI) for Q4/2022 was at 89.22 points, a decrease of 20.83 percent compared to the same quarter last year. The decline was attributed to basic petrochemicals, namely ethylene, and downstream petrochemicals, namely PP and PE resins. Maintenance shutdowns of basic petrochemical plants and inventory depletion also slowed production.

The shipment index in Q4/2022 was at 88.89 points, a decrease of 20.70 percent compared to the same quarter last year. Products that caused the decrease in the shipment index were basic petrochemicals, namely ethylene, and downstream petrochemicals, namely PP and PE resins.

Exports of petrochemicals in Q4/2022 was valued at 2,529.36 million USD, a decrease of 31.26 percent compared to the same quarter last year. Petrochemical products were exported to major markets, including China, Vietnam, and Japan. The decline in export was mainly attributed to a decrease in the export of downstream petrochemicals, such as PP and PE resins, and basic petrochemicals, such as propylene and toluene.

Imports of petrochemicals in Q4/2022 were valued at 1,452.62 million USD, a decrease of 28.98 percent compared to the same quarter last year. The decline in imports was mainly attributed to reduced imports of basic petrochemicals, such as propylene and ethylene glycol, as well as downstream petrochemicals, such as PS and PET resins. The imported petrochemicals were from major countries, including Japan, China, and the US.

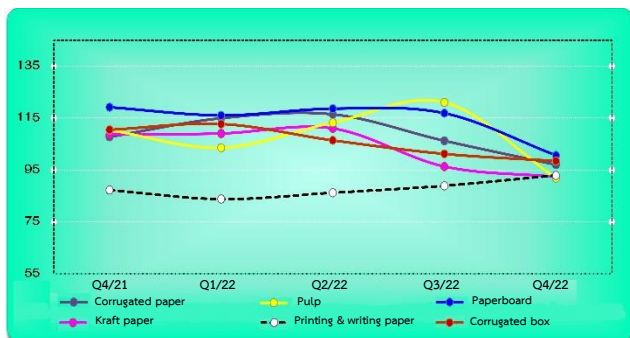
Petrochemical Industry Outlook for Q1/2023

In Q1/2023, the overall petrochemical industry is expected to contract due to global inflation caused by the prolonged Russia-Ukraine conflict, which has increased global energy prices and the cost of cereals and food. Consequently, this will slow down the economic recovery in many countries. Nevertheless, it is crucial to monitor the US economic conditions and China's decision to open up their country, as these factors will impact the global economic trend.

Pulp, Paper, and Print Media Industry

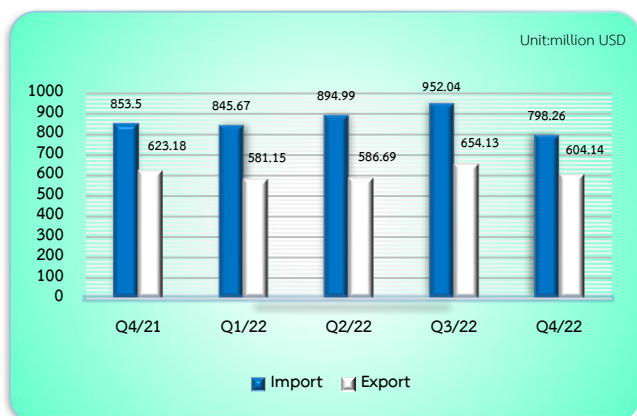
In Q4/2022, the MPI of the pulp, paper, and printing industry decreased by 5.75 percent (%QoQ) and 9.19 percent (%YoY). Additionally, overall exports decreased by 7.64 percent (%QoQ) and 3.06 percent (%YoY), while imports declined by 16.15 percent (%QoQ) and 6.47 percent (%YoY). However, despite this industry's slowdown in the quarter, other sectors, notably tourism, have shown signs of recovery.

MPI in Pulp, Paper and Print Media Industry



Source: The Office of Industrial Economics

Export-Import of Pulp, Paper and Print Media



Source: Information and Technology Communication Center, Ministry of Commerce

Imports

The total imports of pulp and paper products in Q4/2022 amounted to 798.26 million USD, a decrease of 16.15 percent (%QoQ) and 6.47 percent (%YoY). This can be attributed to a considerable drop in domestic production, which resulted in a decrease in the import of some raw materials, especially pulp, recycled paper, or recycled cardboard. However, while the import of paper and paper products declined from the previous quarter (%QoQ), it increased from the same quarter last year (%YoY) for products such as newsprint, printing and writing paper, Kraft paper, and cardboard. Meanwhile, the import of books and publications decreased by 9.60 percent (%QoQ) and 3.60 percent (%YoY).

Pulp, Paper, and Print Media Industry Outlook for Q1/2023

In Q1/2023, paper and paper products used in the production of packaging boxes are expected to grow in line with domestic consumption and online shopping trends. Pulp will turn positive again if China becomes fully open and recovers following the global economy. Print media is not anticipated to be significant amidst the global economic slowdown. Exports this year are expected to contract continuously to a flat rate and pick-up in the second half of the year when the Chinese economy recovers.

Production

In Q4/2022, the production of pulp, cardboard paper, Kraft paper, corrugated paper, and corrugated boxes decreased by 5.75 percent (%QoQ) and 9.19 percent (%YoY). However, printing and writing paper production continued to grow domestically and internationally. The production rate increased by 4.50 percent (%QoQ) from Q2 and Q3 and is expected to continue expanding until Q1/2023 due to orders from South Korea and Vietnam.

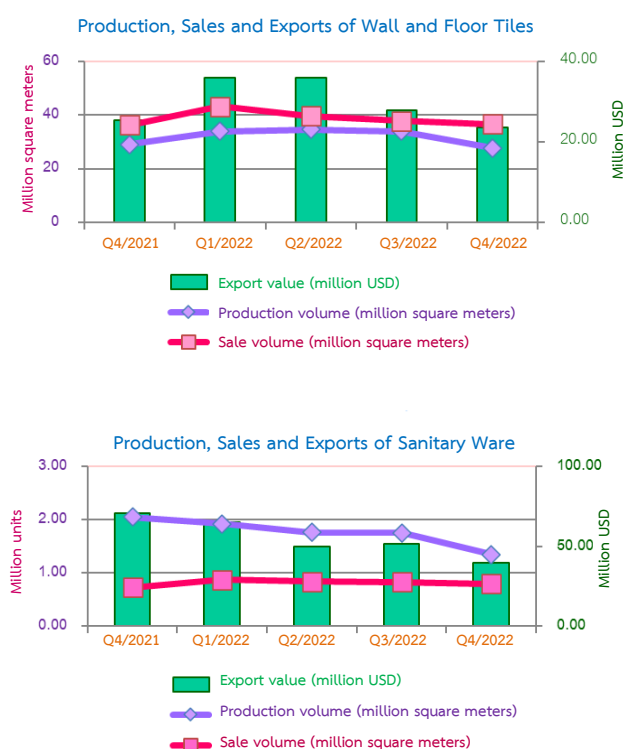
Exports

In Q4/2022, pulp and paper and paper product exports amounted to 604.14 million USD, a decrease of 7.64 percent from the previous quarter. Among the product groups, pulp exports decreased by 8.43 percent, paper and paper products by 7.37 percent, and books and publications by 6.36 percent. Compared to the same period in the previous year, the total export value declined by 3.06 percent, with pulp exports down by 3.67 percent and paper and paper products by 3.19 percent. However, there was an increase of 8.79 percent in books and publications exports. Hong Kong, Cambodia, and the US were the major countries for exports.

Ceramic Industry

Production and exports of floor tiles, wall tiles, and sanitary ware in Q4/2022 decreased due to the economic slowdown in major trading partners such as the US, China, Japan, and CLMV countries. Domestic sales increased due to measures to stimulate the market by entrepreneurs.

Production, Sales, and Export of Ceramics



Source: 1. Domestic Production and Sales: Division of Information and Industrial Economic Indices, Office of Industrial Economics
 Note: From the survey of 15 wall and tiling factories and 38 sanitary ware factories
 2. Export Value: Information and Technology Communication Center, Office of the Permanent Secretary, Ministry of Commerce

The production in Q4/2022 decreased by 18.30 percent (%QoQ) and 4.44 percent (%YoY), with a total production volume of 27.69 million square meters. The decrease was due to a slowdown in the economy and orders from trading partners. As for sanitary ware, the production reached 1.35 million pieces, a decrease of 22.97 percent (%QoQ) and 34.31 percent (%YoY) from the same quarter of the previous year.

Sales in Q4/2022 were 36.55 million square meters, a decrease of 3.22 percent (%QoQ) from Q3/2022 but an increase of 0.54 percent (%YoY) from the same quarter of the previous year. Sanitary ware sales were 0.80 million pieces, a decrease of 4.19 percent from Q3/2022 but an increase of 9.68 percent from the same quarter of the previous year due to market stimulation measures and accelerated delivery of real estate by entrepreneurs at the end of the year.

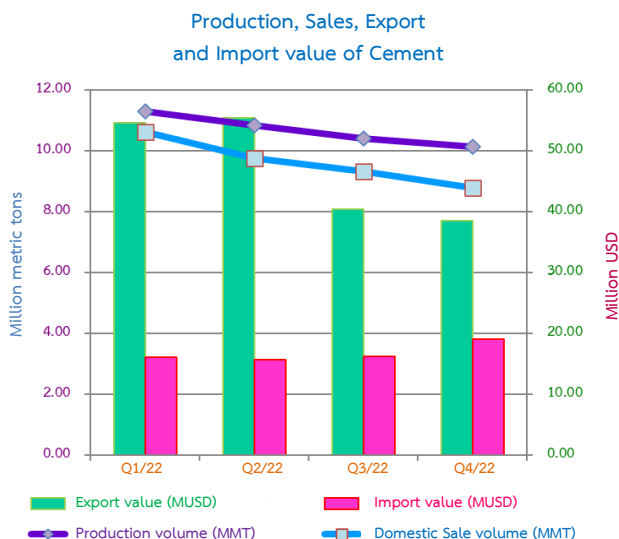
Exports: In Q4/2022, the export of floor and wall tiles decreased by 15.30 percent (%QoQ) and also decreased by 6.43 percent (%YoY), with a total value of 23.64 million USD. The decrease was due to a decline in purchase orders from the US, China, Japan, and the CLMV countries. Meanwhile, the export of sanitary ware decreased by 22.36 percent (%QoQ) and 43.61 percent (%YoY), with a total value of 39.89 million USD.

Ceramic Industry Outlook for Q1/2023

Production and domestic sales of ceramics in Q1/2023 are expected to grow following the demand of domestic consumers from the government's economic stimulus measures and increasing purchase orders from major trading partners. Exports are likely to expand as well following the gradual economic recovery in many countries after the COVID-19 outbreak subsides, with the main export markets being the US, China, Japan, and ASEAN countries. Nevertheless, there are important factors that need to be monitored closely, such as inflation situation, the increase of production costs from energy prices, labor shortage, and the global economic slowdown that affects the export sector.

Cement Industry

The cement industry in Q4/2022, compared to the same quarter last year, increased in production to support the real estate sector's growth after the pandemic's easing. However, sales declined compared to last year's higher base before the Russian-Ukrainian conflict. Exports rose slightly, while imports increased.



Source: 1. Domestic Production and Sales: Division of Industrial Economics Information and Indices, Office of Industrial Economics
2. Export-Import Value: Information and Technology Communication Center, Office of the Permanent Secretary of Commerce

Cement production (excluding clinker) in Q4/2022 reached 10.15 million tons, a decrease of 2.42 percent from Q3/2022 (%QoQ) but an increase of 1.72 percent from the same quarter last year (%YoY), to support the expansion of the real estate sector after the spread of COVID-19 relaxed.

Domestic sales of cement (excluding clinker) in Q4/2022 reached 8.79 million tons, a decrease of 5.75 percent from Q3/2022 and by 5.56 percent from the same quarter last year (%YoY), when compared to a higher base before the Russian-Ukrainian conflict, affecting the domestic and global economy.

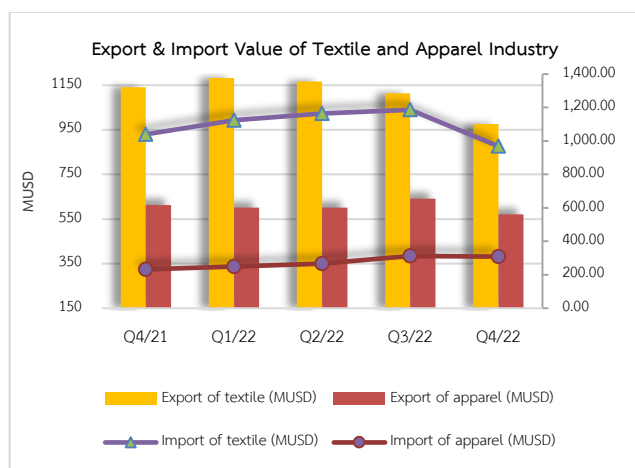
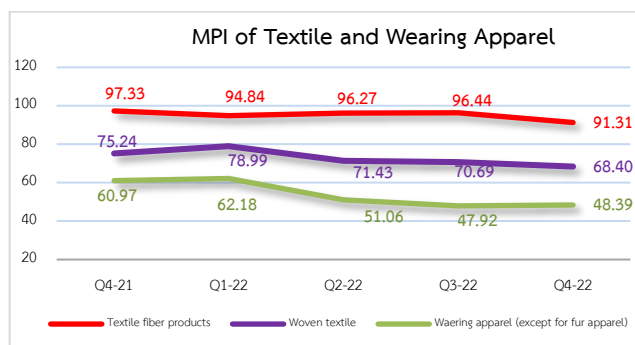
Cement exports and imports (excluding clinker) in Q4/2022 valued 38.57 million USD in exports, a decrease of 4.67 percent (%QoQ) compared to Q3/2022. Compared to last year's quarter, the export value increased slightly by 0.51 percent from the Myanmar market, which grew by 22.93 percent. Economic conflicts between Russia and Ukraine affected other key export markets. Cement imports (excluding clinker) were valued at 19.03 million USD, an increase of 17.50 percent from Q3/2022 and an increase from the same quarter last year by 24.98 percent. Imports increased from China and Laos by 51.93 percent and 28.27 percent, respectively.

Cement Industry Outlook for Q1/2023

The cement industry (excluding clinker) in Q1/2023 expects to see slower growth in production and sales volume compared to the same quarter last year. Even though the opening of Thailand and China supports the real estate sector, it has been pressured by the global economy, which has slowed down. In addition, new government measures to stimulate the real estate market offer fewer consumer benefits than the old measures that expire at the end of 2022. These factors may cause the demand for cement for real estate to not grow as much as it should.

Textile and Wearing Apparel Industry

In Q4/2022, the MPI of the textile and wearing apparel industry is expected to contract compared to the same period last year, from a contraction throughout the supply chain from decreased orders from trading partner countries. As a result, business operators reduced the production of raw materials from upstream to downstream. Compared to the previous quarter, the MPI of textiles grew in the weaving of natural fibers and other fibers due to the changing world situation. Business operators, therefore, began to adapt to produce raw materials that are more environmentally friendly.



Production

The MPI of textile fiber products contracted by 6.19 percent (%YoY) from man-made fiber production and natural fiber spinning. Weaving contracted by 20.64 percent (%YoY) and clothing by 9.12 percent (%YoY) due to fewer orders from trading partner countries in major markets such as the US, Belgium, and Hong Kong. Therefore, business operators reduced the production of raw materials from upstream to downstream. However, compared to the same quarter last year (%QoQ), the MPI of weaving products grew by 0.98 percent in weaving from natural fibers and other fibers due to the changing situation of the world. Business operators, therefore, began to adapt to produce raw materials that are more environmentally friendly.

Domestic Sales

Textile fibers contracted by 4.69 percent from cotton yarn. Yarns from man-made fibers and fabrics decreased by 19.80 percent from the woven fabrics group (cotton) and woven fabrics (synthetic fibers). Clothes grew by 10.64 percent (%YoY) from the policy to reopen the country after the relaxation of COVID-19 measures. As a result, the number of domestic and international tourists increased. Additionally, government support measures helped the domestic economy to recover. However, compared to Q3/2022, clothes continued to grow with an increase of 0.26 percent.

Exports-Import

Exports: Textiles and wearing apparel contracted throughout the supply chain, valued at 1,547.16 million USD, shrinking 11.77 percent (%YoY). Considering product groups, textiles valued at 976.17 million USD, a contraction of 14.43 percent, and apparel valued at 570.99 million USD, a decrease of 6.81 percent. The contraction was due to reduced orders from major trading partners such as China, Japan, Indonesia, Vietnam, the US, Belgium, and Hong Kong, and the global economic situation that continued to slow down. In addition, using monetary policy to control inflation in many countries affected consumers' purchasing power and economic activity.

Imports: Overall, textiles and garments were valued at 1,294.96 million USD, a growth of 1.82 percent (%YoY) from threads, fibers, and garment, especially the garment group, which was valued at 308.39 million USD, a growth of 32.65 percent. A large volume of cheap to moderately priced goods was imported from China for sale by online merchants, and imports of world-famous and regional brand clothing to sell according to the direction of demand.

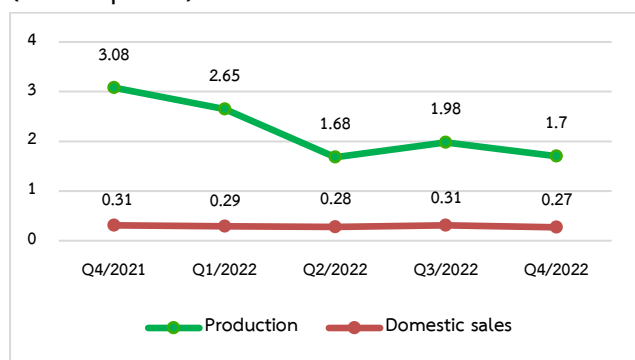
Textile and Wearing Apparel Industry Outlook for Q1/2023

The textiles and wearing apparel manufacturing industry is expected to grow slightly from domestic demand, from the recovery of the tourism sector, and China's declaration of opening up after implementing the Zero-COVID policy for more than three years, which is a good sign for exports to the Chinese market. This is coupled with government stimulus measures such as "Shop Dee Mee Kuen" and the "We Travel Together Project" (Phase 5). However, there are still risks from fragile consumer purchasing power from high living costs, fluctuations in raw materials, and energy prices, causing production costs to increase. This may result in more raw materials being imported. In addition, the inflation rate may affect the competitiveness of entrepreneurs.

Wood and Wooden Furniture Industry

Compared to the same quarter of the previous year, the production of wooden furniture in Q4/2022 decreased due to a decrease in domestic and international orders. The value of wood and wood-based product exports also decreased due to declining demand from key trading partners and a high base for exports in the previous year.

Domestic Production and Sales of Wooden Furniture (million pieces)

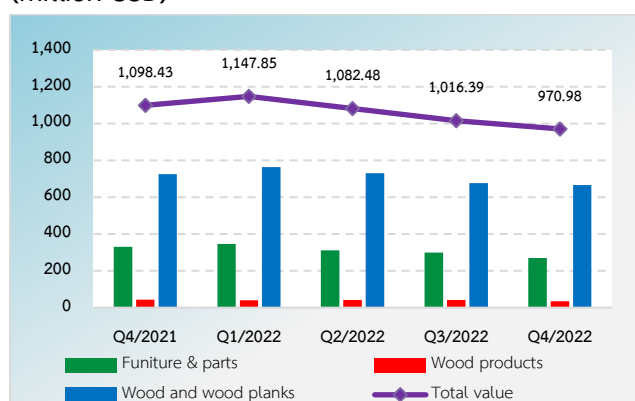


Source: The Office of Industrial Economics

Production of wooden furniture in Q4/2022 reached 1.70 million pieces, a decrease of 14.14 percent from the last quarter and 44.81 percent from the same quarter of the previous year. The decrease was due to a decline in both domestic and international orders.

Domestic sales of wooden furniture in Q4/2022 reached 0.27 million pieces, a decrease of 12.90 percent from the previous quarter and the same quarter of the previous year, from the rising cost of living. As a result, consumers were cautious about spending on products that can slow down their purchases.

Export Value of Wood and Wooden Products (million USD)



Source: Office of the Permanent Secretary, Ministry of Commerce

Exports value of wood and wooden products In Q4/2022, exports of wood and wood products reached a total value of 970.98 million USD, a decrease of 4.47 percent (%QoQ) and 11.60 percent (%YoY). The exports were divided into three categories: furniture and parts, wood products, and wood and wooden products, with values of 269.86, 34.89, and 666.23 million USD, respectively. Compared to the same quarter of the previous year, the export value of furniture and parts, wooden products; and wood and wood board products decreased by 18.36 percent, 18.42 percent, and 8.12 percent, respectively. The overall export value of wood and wood products declined in all product groups due to a decrease in demand from major trading partners and the high export figures from the previous year.

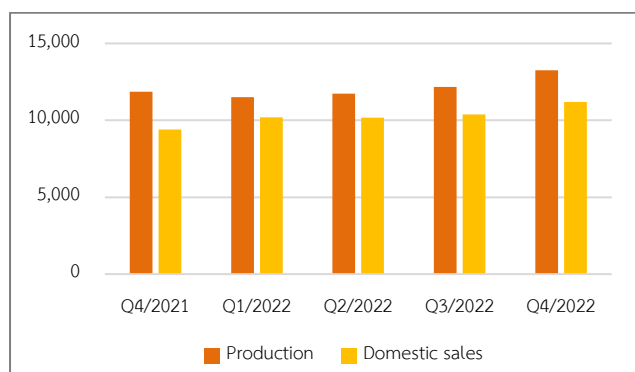
Wood and Wooden Furniture Industry Outlook for Q1/2023

In Q1/2023, wooden furniture production is expected to slow down as demand from the international market continues to decline. The sales volume of wooden furniture in the country is expected to resume growth from the recovery of purchasing power and the domestic economy. Exports of wood and wood products are expected to decrease in value from the continued slowdown in demand from key trading partners and the high base of export figures in Q1/2022.

Pharmaceutical Industry

In Q4/2022, production and domestic sales of medicinal drugs increased compared to the same quarter of the previous year. This was due to growth in orders and demand, particularly among the elderly and the increasing number of patients with non-communicable diseases (NCDs). Meanwhile, the export sector saw good growth in Cambodia, Vietnam, and Malaysia.

Domestic Production and Sales (metric tons)



Source: The Office of Industrial Economics

Note: The survey data framework has been updated from 2021

Pharmaceutical Import-Export Value (Million USD)



Source: Ministry of Commerce with the cooperation of the Customs Department

Pharmaceutical production in Q4/2022 reached 13,254.42 metric tons, an increase of 12.24 percent compared to the same quarter of the previous year, due to the expansion of medicinal cream, tablet, and liquid medicine production, which increased by 31.95 percent, 23.05 percent, and 18.59 percent, respectively, in response to increased purchase orders from pharmacies and hospitals.

Pharmaceutical sales in Q4/2022 amounted to 11,194.74 metric tons, an increase of 17.11 percent compared to the same quarter of the previous year from the expansion of the distribution of medicinal power, creams, and liquids, which increased by 47.9 percent, 32.46 percent, 31.48 percent, and 8.95 percent, respectively. The increase in demand for medicines was particularly evident in the elderly population and non-communicable disease (NCD) patients, which has been increasing in numbers.

Exports of pharmaceuticals in Q4/2022 were valued at 116.73 million USD, an increase of 7.20 percent compared to the same quarter of the previous year. This was due to the increased demand in neighboring markets such as Cambodia, Vietnam, and Malaysia for imported drugs. Meanwhile, the import of medicines was valued at 451.22 million USD, a decrease of 2.13 percent from the same quarter of the previous year.

Pharmaceutical Industry Outlook for Q1/2023

In Q1/2023, the production and domestic sales of pharmaceuticals are expected to increase compared to the same quarter of the previous year, as the demand for medicines to treat diseases increased. Exports are expected to grow due to the increasing demand from key markets, especially ASEAN.

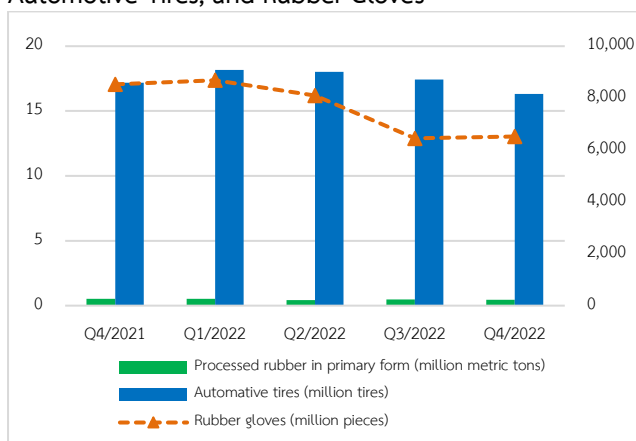
Government Policies Relevant to the Pharmaceuticals Industry

On January 3, 2023, the Cabinet approved in principle the draft of the Ministerial Regulation on the Renewal of the Certificate of Registration of Drug Formulas BE..... as proposed by the Ministry of Public Health. When the Ministerial Regulations are enforced by law, they will protect public safety, promote access to quality and effective medicine, and help build entrepreneurs' competitiveness in the pharmaceutical manufacturing industry throughout the chain.

Rubber and Rubber Product Industry

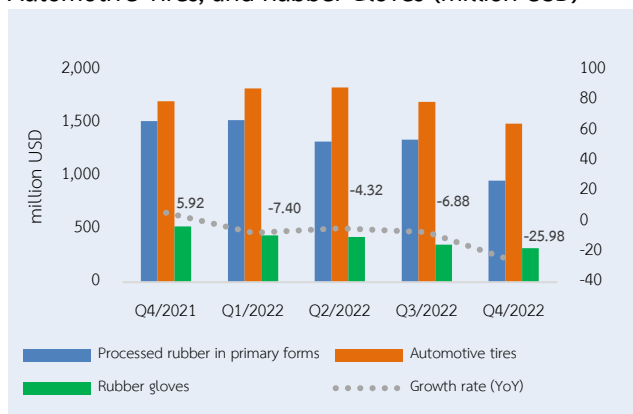
In Q4/2022, the production of processed rubber in primary forms, tires, and rubber gloves decreased in all three products, mainly due to the decline in the global market demand. The export value of upstream processed rubber decreased due to the slowdown in the Chinese market. The value of tires and rubber gloves exports declined due to the US market's slowdown.

Production Volume of Processed Rubber in Primary Form, Automotive Tires, and Rubber Gloves



Source: The Office of Industrial Economics

Export Value of Processed Rubber in Primary Forms, Automotive Tires, and Rubber Gloves (million USD)



Source: Ministry of Commerce

Production of processed rubber in primary forms, automotive tires, and rubber gloves in Q4/2022 amounted to 0.46 million metric tons, 16.31 million tires, and 6,515.42 million pieces, respectively. Compared to the same quarter of the previous year, the production of processed rubber in primary forms decreased by 11.54 percent due to the decrease in the production of rubber sheets and concentrated latex. The production of automotive tires decreased by 5.12 percent due to the decrease in the production of passenger car tires, truck tires, and tractor tires. The production of rubber gloves decreased by 23.57 percent due to the decrease in demand for rubber gloves in foreign markets.

Sales of processed rubber in primary forms, automotive tires, and rubber gloves in Q4/2022 reached 0.11 million metric tons, 10.17 million tires, and 569.00 million pieces, respectively. Compared to the same quarter of the previous year, the sales of processed rubber in primary forms decreased by 8.33 percent due to the continuous decline in demand in the industry. The sales of car tires decreased by 10.08 percent due to the slowdown of the Replacement Equipment Manufacturing (REM) market. On the other hand, the domestic sales of rubber gloves increased by 13.23 percent due to the high demand for rubber gloves to prevent diseases.

Exports of processed rubber in primary forms, automotive tires, and rubber gloves in Q4/2022 were valued at 959.92, 1,497.32, and 320.57 million USD, respectively. Compared to the same quarter of the previous year, the export of processed rubber in primary forms, automotive tires, and rubber gloves decreased by 36.84 percent, 12.28 percent, and 39.09 percent, respectively, due to the demand for these products in the global market have dropped.

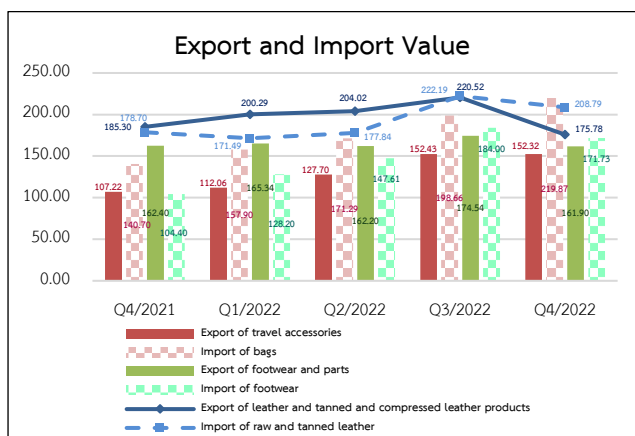
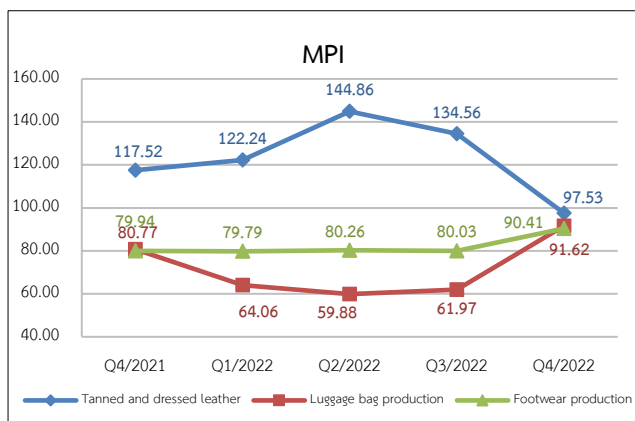
Rubber and Rubber Products Industry Outlook for Q1/2023

In Q1/2023, the production volume of processed rubber in primary forms is expected to expand in response to domestic and international market demand. However, the production volume of rubber gloves is expected to continue to slow down following the decreasing demand for rubber gloves in the global market, coupled with the high production base in Q1/2022.

Footwear and Leather Product Industry

In Q4/2022, tanning and dressing of tanned leather decreased in production compared to the same quarter last year. The production of bags and shoes increased following the increasing demand for exports and domestic sales as the world relaxed measures, and many countries reopened to tourists to stimulate spending. However, the Russian-Ukrainian conflict must be monitored, as if prolonged, it will affect energy prices and inflation worldwide.

Production, Exports, and Imports (MUSD)



Source: 1. MPI – The Office of Industrial Economics 2. Export & Import Value – Ministry of Commerce
 * including handbags and similar products, saddles, and harnesses
 ** Year 2021 add the products and adjust the weights

Production

In Q4/2022, compared to the same period of the previous year the MPI of tanning and finishing tanned leather decreased by 17.01 percent due to a decrease in exports. The production of bag and shoes increased by 13.42 percent and 13.10 percent from an increase of domestic sales and exports.

Exports-Imports

In Q4/2022, compared to the same period of the previous year, the export value of leather products, including tanned leather, tanned leather, and footwear, decreased by 5.14 percent and 0.31 percent, respectively. However, the export value of travel goods increased by 42.09 percent to 152.32 million USD, with major export markets including the US, China, Switzerland, Japan, and India. This was due to the relaxation of COVID-19 measures in many countries. Nevertheless, political tensions continued to affect energy prices, transportation costs, and global inflation.

In terms of imports, in Q4/2022, compared to the same period of the previous year, the import value of raw leather and tanned leather increased by 16.84 percent and 56.27 percent, respectively, while the import value of bags and footwear increased by 64.49 percent and 56.27 percent, respectively. Major sources of imported bags include Italy, China, France, Spain, and South Korea. These increases resulted from economic stimulus measures, increased consumer purchasing power, and the resumption of tourism.

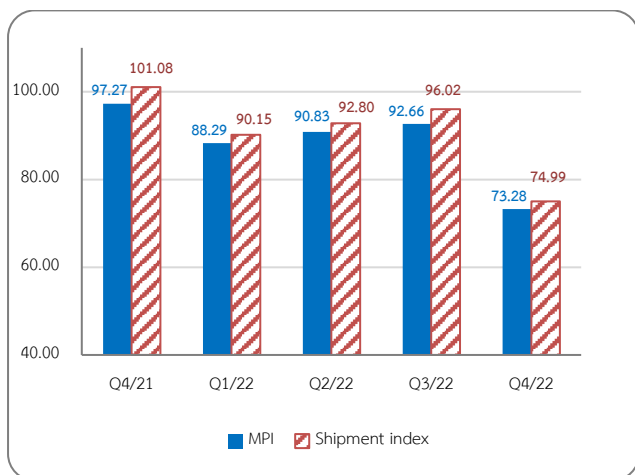
Footwear and Leather Production Industry Outlook for Q1/2023

In Q1/2023, compared to last year, production of leather wares and foot ware is expected to increase in all products, including tanning and finishing leather, bag, and footwear, due to an anticipated increase in exports and domestic sales compared to the previous year as many countries begin to open up to normal conditions. Nonetheless, it is essential to monitor the ongoing conflict between Russia and Ukraine, which could have an impact, particularly the continuously rising energy prices that could lead to an increase in consumer goods prices, causing inflation and affecting the purchasing power of consumers and the global economy and trade.

Gems and Jewelry Industry

In Q4/2022, compared to the same quarter of the previous year, the overall production and sales of gems and jewelry decreased from a decline in exports, in line with the demand of trading partner countries such as the US, Singapore, India, Australia, and Switzerland. The pressure of the global economy slowing down from inflation and the implementation of strict monetary policies in many countries affected the purchasing power of consumers. However, the tense geopolitical conflict must also be monitored, together with the global economic slowdown from inflation and interest rates that continue to rise.

Production, Sales, and Exports

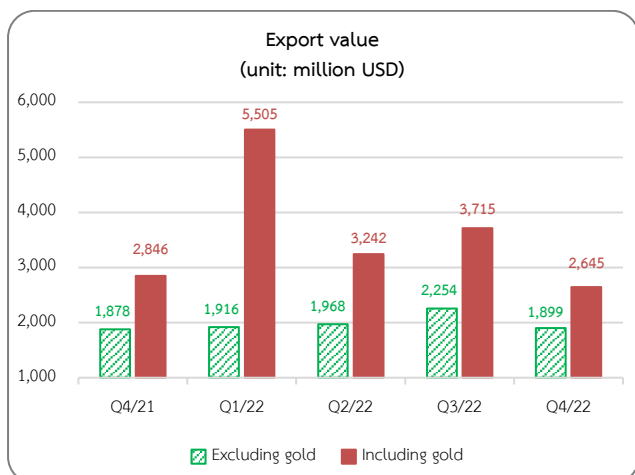


Production

Production of gems and jewelry in Q4/2022 decreased by 24.66 compared to the same quarter of the previous year (%YoY) from production in all products. Diamonds, genuine jewelry, and imitation jewelry decreased by 4.10 percent, 26.95, and 12.55 percent, respectively, due to decreased exports, following the demand of trading partners such as the US, Singapore, India, Australia, and Switzerland.

Sales

Gems and jewellery sales in Q4/2022 compared to the same quarter of the previous year (%YoY) decreased by 25.81 percent from all products. Diamonds, genuine jewellery, and imitation jewellery decreased by 24.33 percent, 27.18 percent, and 11.27 percent, respectively, due to the global economic slowdown, inflation, and the implementation of strict monetary policies in many countries, affecting the purchasing power of consumers.



Exports

In Q4/2022, the export of gems and jewellery (excluding gold) compared to the same quarter last year (%YoY) reached a total value of 1,898.52 million USD, an increase of 1.09 percent due to an increase of 45.43 percent in the export value of coloured stones. However, the export value of diamonds, genuine jewellery, and artificial jewellery decreased by 1.62 percent, 1.68 percent, and 6.68 percent, respectively. If considering the overall export of gems and jewellery, the total export value was 2,644.92 million USD, a decrease of 7.06 percent. The export value of unwrought gold was 746.40 million USD, a decrease of 22.87 percent in Cambodia, Hong Kong, Malaysia, South Korea, and Japan markets.

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

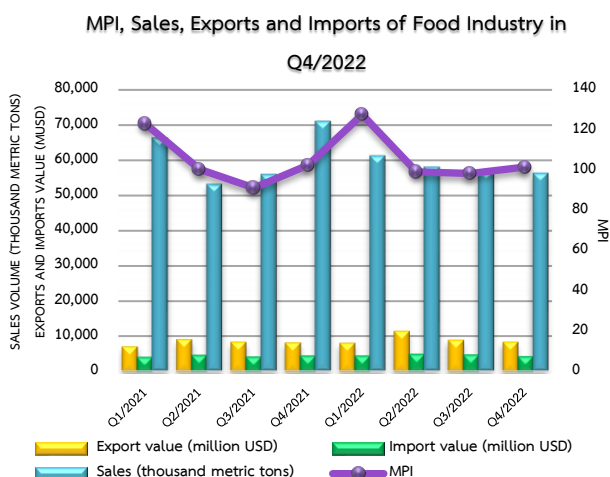
Gems and Jewelry Industry Outlook for Q1/2023

Overall gems and jewelry production in Q1/2023 is expected to slow down, in line with a decrease in demand from trading partners. Part of it is the impact of economic problems occurring around the world from inflation, and the purchasing power of consumers is still fragile. However, there are still factors supporting domestic consumption from the tourism sector, including measures to stimulate the economy from the government that focuses on helping the people's cost of living to stimulate domestic spending. Tense geopolitical conflicts must also be monitored, including the global economic slowdown from inflation and interest rates that continue to rise, which may affect the domestic manufacturing and export sectors.

Food Industry

The MPI of the food industry in Q4/2022 contracted compared to the same period last year due to the economic slowdown. Higher production costs from various factors, such as raw materials and energy prices, affected the demand for the consumption of goods both domestically and internationally. Additionally, the base of the previous year was quite high as the economic situation improved after the relief of the COVID-19. Meanwhile, the export sector grew, although the economy of the main trading partners showed signs of a slowdown.

MPI, Sales, Exports, and Imports of industrial products



Source: The MPI and Sales volume collected from the Office of Industrial Economics. Export-import value compiled from the Ministry of Commerce by the grouping of the Office of Industrial Economics

The MPI of the food industry in Q4/2022 reached 98.5, a slight contraction of 1.3 percent (%YoY) compared to the same quarter last year. Food products that contracted included **processed fruits and vegetables**, which contracted by 15.6 percent, mainly from dried fruits and vegetables (-33.1%), due to decreased domestic and export demand for such products. This was followed by **fishery**, which contracted by 8.3 percent from frozen shrimp (-6.9%) due to higher aquaculture costs and higher selling prices. **Cassava starch** contracted by 11.1 percent due to less production of cassava tubers from continuous rain. As a result, some parts of the cassava harvest area were damaged. However, the production of some products still grew, including palm oil, which grew by 32.5 percent, from important products such as crude and refined palm oil, due to the increasing demand in various industries, such as the biodiesel and food industry, following the recovery of the economy and the high production of palm oil this year. **Sugar** grew by 5.5 percent, from white sugar, due to higher demand following the economic expansion. **Livestock** increased by 2.1 percent from the main products, which were chilled and frozen chicken, due to domestic and international market demand and growing exports to new markets like Saudi Arabia.

Domestic food sales in Q4/2022 were valued 56,474.27 thousand metric tons, a decrease of 17.7 percent compared to the same quarter last year. The most domestically consumed product was other canned fruits, which decreased by 46.3 percent, followed by frozen shrimps (-20.5%), table seasoning (-20.3%), and tapioca starch (-17.8%).

In Q4/2022, **food exports** were valued at 8,400.54 million USD, a growth of 2.7 percent compared to the same quarter last year. This growth was driven by key products such as livestock, chilled and frozen chicken, with the main export markets being China and Japan, followed by vegetable and animal oils and fats exports, mainly palm oil, with the major markets being India.

Imports in Q4/2022 were valued at 4,309.92 million USD, a contraction of 4.4 percent compared to the same quarter last year (%YoY) from oilseeds (soybean) that contracted as soybean prices in the world market was high, causing manufacturers to bear higher costs. This affected the soybean oil industry, which has no substitute raw materials. Therefore, people turned to consuming alternative products such as palm oil, which is cheaper. Cereals contracted due to fluctuating grain quantities from the Russo-Ukrainian war, which affected production costs and selling prices.

Food Industry Outlook for Q1/2023

The overall production and export value are expected to contract slightly compared to the same quarter of the previous year due to the global economic slowdown and the economy of major trading partners. As a result, the demand for products is expected to decrease. Furthermore, higher production costs from energy prices and the appreciation of the Thai Baht may affect Thailand's export sector, including from the high base of the same quarter last year from economic growth after the relief of the COVID-19. However, domestic demand is expected to improve in the tourism sector.

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| <ul style="list-style-type: none"> ● Sectoral Industry <ul style="list-style-type: none"> ● Iron and Steel Industry ● Electrical Appliance Industry ● Electronics Industry ● Automotive and Parts Industry ● Motorcycle and Parts Industry ● Chemical Industry ● Plastics Industry ● Petrochemical Industry ● Pulp, Paper and Print Media Industry ● Ceramics Industry ● Cement Industry ● Textile and Garment Industry ● Wood and Wooden Furniture Industry ● Pharmaceutical Industry ● Rubber and Rubber Products Industry ● Footwear and Leather Products Industry ● Gems and Jewelry Industry ● Food Industry | <ul style="list-style-type: none"> Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 1 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 Division of Industrial Policy by Sector 2 | <ul style="list-style-type: none"> 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6804 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 0-2430-6805 |