



Summary of Key Issues

The Manufacturing Production Index (MPI) in December 2016 grew by 0.5%. The key industries leading to such growth included iron and steel, electronic parts, other rubbers rather than automotive rubber tire, ornament and canned frozen seafood.

The growth of electronic components in December 2016 was expanding well from ICs, the essential parts for high-tech product development. Thus the exporting to major markets was all increasing.

The growth of canned and frozen seafood increased in December 2016 from the growth of frozen fish and secondly the frozen squid. This was due to high demand from market expanding by manufacturer who expedites production whenever the raw materials are available.

Commencement and Disposal of Factory's Register

In December 2016, 430 plants obtained the manufacturing licenses and commenced the operation which increased by 27.2% from November 2016. The total invested capital increased by 168.1%. The employment increased by 50.3%. The major investment was from electricity power turbine industry, at ฿13,744.35 million invested capital. When comparing with the same month of the previous year, the number of plants that obtained the manufacturing license and commenced the operation increased by 20.8% from December 2015. On the other hand, 99 Factory's Registers were disposed in December 2016 which increased by 4.2% from November 2016 and decreased by 10.0% from the same month of the previous year.



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Thailand's Importation of Industry sector

In December 2016, the import of industrial machinery and components valued US\$1,438.8 million which shrank by 4.7% from the same month of the previous year from the importation of engine, transmission shaft, model base, formwork and its components, latex processing machinery and construction machinery and its components.

The import of raw material and semi-finished product (excluding gold) valued US\$ 5,914.4 million, increasing by 15.9% from the same month of the previous year. This was in line with the increasing of importation of plastic, metal and steel, electrical appliance product and its components and chemical.

Electricity power consumption of Industry sector

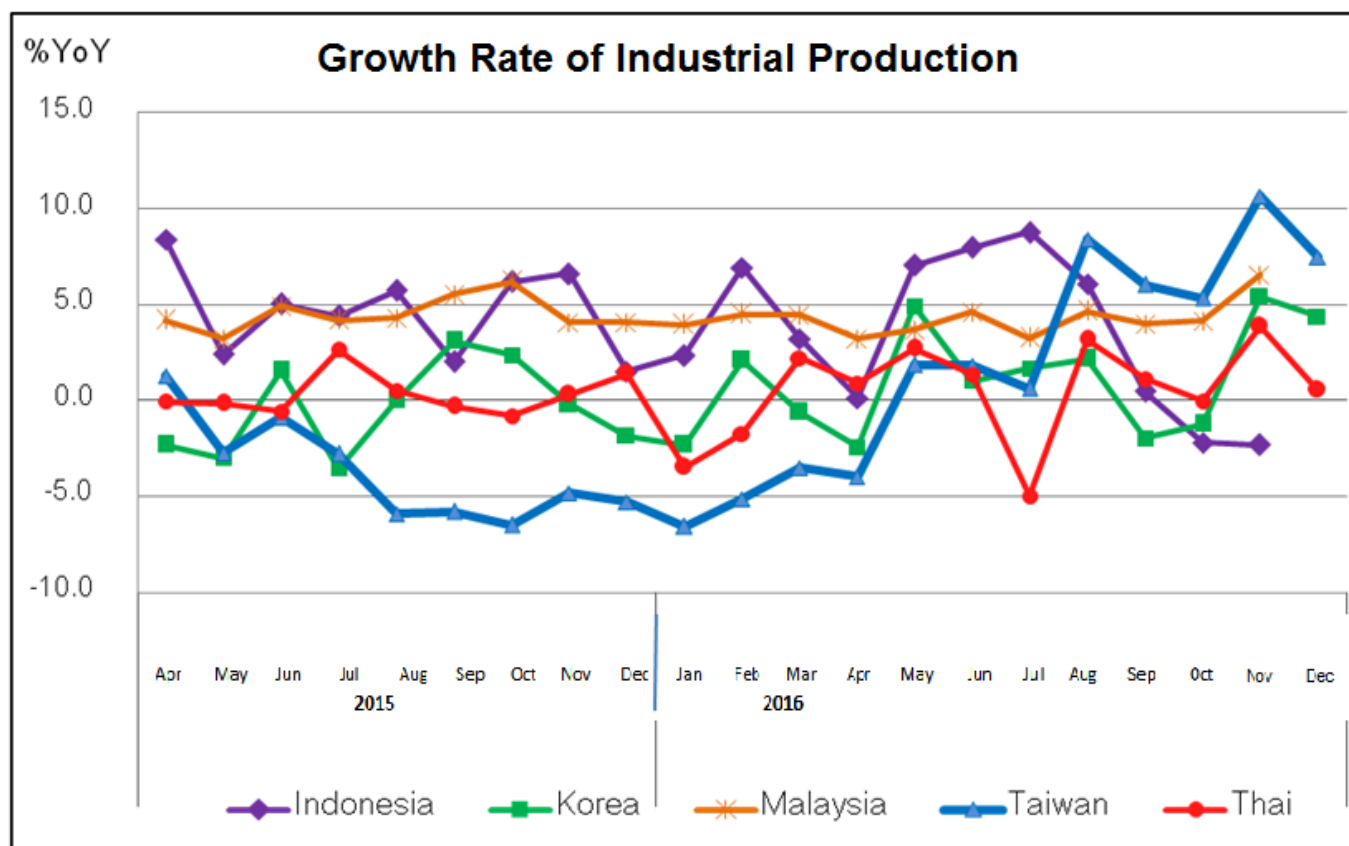
In December 2016, there was consumption of 9,850 million kWh (kilowatt-hour) which was 5.3% decreasing from last month (10,400.7 million kWh) and 1.6% increasing when comparing with the same period of year 2015 (9,695.3 million kWh). The annual accumulative power consumption in 2016 was 123,989.8 million kWh, 4.1% increasing from the same period of the previous year (119,082.1 million kWh). The electricity power consumption data classified by business size shows that the small and medium sized businesses consumed lesser than last month and the same month of last year while the large one consumed lesser than last month but more from the same month of the previous year.



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Industrial Economics Condition of Thailand Comparing with Major Countries in Asia in December 2016



The Manufacturing Production Index (MPI) grew by 0.5% from the same period of the previous year. The major industries contributing to such growth included iron and steel product, electronic tube and electronic components, rubber product, ornament and canned and frozen seafood etc.

Meanwhile the industrial production growth of Taiwan was expanded by 7.5%. The industrial production growth of South Korea was shrunk by 4.4%.

The industrial production growth of Malaysia and Indonesia in December 2016 has yet to be released. However in November 2016, the industrial production growth of Malaysia expanded by 6.5% while Indonesia dropped by 2.3%.



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Manufacturing Operation Situation in December 2016

The data from the Department of Industrial Works (DIW) indicated the manufacture operation situation of December 2016 comparing with November 2016 that 430 plants commenced the operation. It decreased by 27.2% from November 2016 (338 plants). The invested capital was ฿ 55,503 million which increased by 168.1% from November 2016 (฿20,699 million). The numbers of employment was 13,775 persons which increased by 50.3% from November 2016 (9,166 persons).

The report of manufacture operation situation of December 2016 when comparing with the same month of the previous year indicated that the plants commencing the operation increased by 20.8% from December 2015 (356 plants). The invested capital increased by 60.9% from November 2015 (฿ 34,502 million). And the numbers of employment increased by 85.7% from December 2015 (7,419 persons).

- The industry that had the most manufacturing starting up in December 2016 was electricity production from solar power (totally 58 plants). The following were the ready-mixed concrete, piles and slabs concrete manufacturing (totally 37 plants).
- The industry with the highest level of invested capital in December 2016 was electricity production from thermal power (totally ฿13,744.35 million). The following was the electricity production from solar power (totally ฿12,346.85 million).
- The newly-operated industry that had the most employment in December 2016 was the slaughtering plant (3,147 persons). The following was the industry of wood sawing, shaving, undercutting and processing (1,030 persons).



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Manufacturing Shutdown situation

In December 2016 the numbers of plants closing down were 99 plants, increasing by 4.2% from November 2016 (95 plants). The total invested capital loss from such shutdown was ฿ 1,771 million which was more than November 2016 (฿1,577 million) However the numbers of lay-off workers were 3,290 persons, lesser than in November 2016 (3,803 persons).

The number of plants closing down in December 2016 was 10.0% lesser than in December 2015 (110 plants). However the invested capital loss due to plant shutdown was more than December 2015 which was ฿1,371 million and the numbers of lay-off workers was also more than in December 2015 which was 2,895 persons.

- The industry that had the most manufacturing shutdown in December 2016 was the automobiles repairing plants (totally 10 plants). The following was soil, boulders and gravel dredging plants (8plants).
- The shutting down industry with the highest loss of invested capital in December 2016 was the plants with pumping and impact processes, totally ฿488 million. The following was electricity power plants, totally ฿ 297 million.
- The industry that had the most lay-off workers in December 2016, (1,061 workers) was clothes and garment making industry. The following was the gemstones cutting and polishing plants, (810 workers).



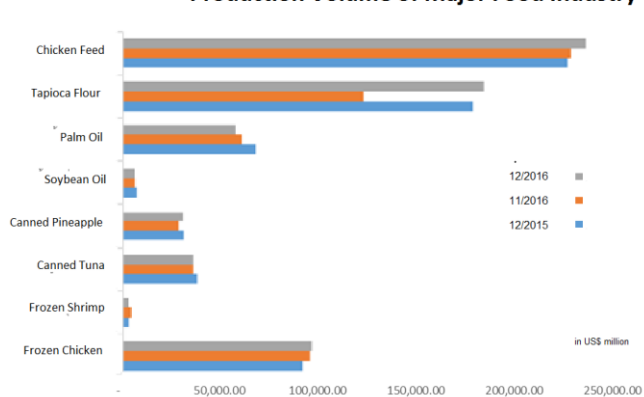
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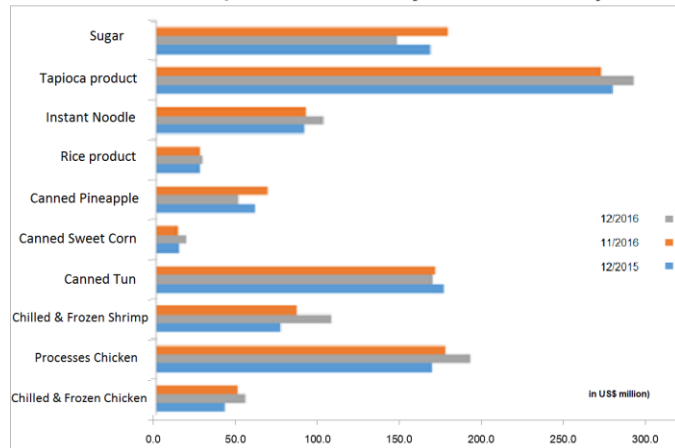
I. Food Industry

The production and export value of the food industry decreased due to the increasing of agriculture production. Thai export situation was better from the same period of the previous year better from the increasing export demand and the higher price level.

Production Volume of Major Food Industry



Export Value of Major Food Industry



1. Production

The production of major food industry in December 2016 decreased by 5.2%, from the same period of last year. The details are:-

1) Export-oriented Products: The frozen shrimp and canned tuna decreased by 13.4% and 2.5% respectively due to the shortage of raw materials and the higher price level that the manufacturers turned to produce canned feed additives instead.

2) Domestic-oriented Products: The products which use domestic raw materials such as palm oil decreased

16.5% from the shortage of raw materials from heavy flood in southern area. However the products use imported raw material i.e. soybean oil decreased by 11.3% due to decreasing of domestic consumption demand.

2. Marketing

1) Domestic Market:

The domestic sales value in December 2016 of food and agriculture products decreased by 1.4% from the same month of the previous year. This was from the gradually economic recovery and the affect from heavy flood in southern area in the beginning of this December.

2) Export Market:

The total export value in December 2016 of food product increased by 2.9%. The products included frozen fresh chicken, frozen fresh shrimp, canned pineapple, processed chicken, instant noodle and processed rice products, and canned tuna, which increased by 19.1%, 13.0%, 12.2%, 5.2%, 1.5% and 0.2% respectively. Although the global economy still remained slow down and fluctuated, Thai export situation was still better than those other exporting countries. However some exported items reduced e.g. canned sweet corn and canned tuna by 4.4% and 2.8% respectively. The export of sugar product increased by 6.2% from the same month of last year due to the increasing export price by 50%.

3. Trend

In overview the production and export in January 2017 is anticipated to be slightly expanded from the previous year due to the positive factors in several products such as the EMS disease recovery of shrimp increased production of the product, the lower product output from rival countries. The growth of rice and grain would be from increasing export of tapioca chip to China from lower stock while Chinese government does not subsidize purchasing like last year. The liver stocks product would be increasing from continuously increasing export of chicken products (frozen fresh chicken and processed chicken) since 2016. This was due to the dispersion of bird flu in major imported countries i.e. Japan, European countries and South Korea and thus there would be no effect from decreasing orders of sugar product.

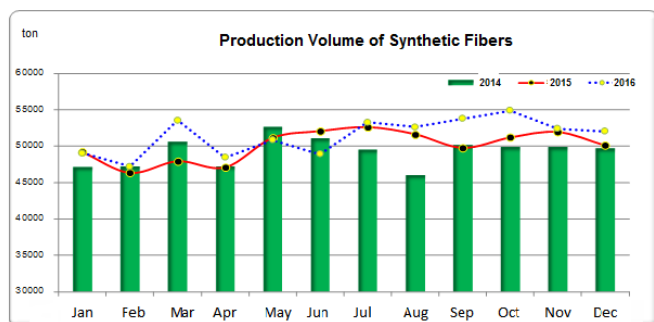


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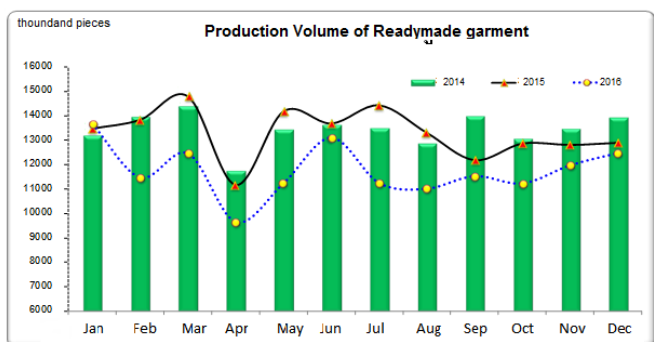
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II. Textile and Garment Industry

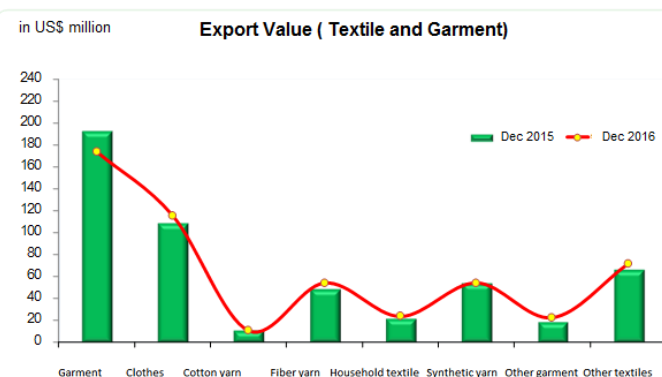
Manufacturing of textile increased in the synthetic fibers and fabrics due to the higher domestic demand. The garment production decreased due to the high import of readymade clothes.



source : Industrial Economics Information Center, Office of Industrial Economics



source : Industrial Economics Information Center, Office of Industrial Economics



Source : Information Technology Center, International Trade Negotiation Department, Ministry of Commerce

1. Production

□ **Textile sector:** When comparing with the same month of the previous year, the manufacturing of the textile fiber product increased by 3.9 % in both synthetic fiber and thread which increased by 4.6 and 0.5% respectively mainly from the higher domestic demand. The production of fabric increased 1.7% due to higher purchase order for readymade clothes.

□ **Garment sector:** When comparing with the same month of the previous year, the manufacturing of readymade garment product decreased by 3.3%, especially in the weaving fabrics which decreased 7.3%. This was from the black clothes demand was saturated as well as from increasing import from China, Cambodia, Vietnam and Italy resulted in dropping in local production.

2. Marketing

□ **Domestic Sales:** When comparing with the same month of the previous year, the sales volume of Textile fibers product, mostly sold to local textile factories which although market shrank by 3.0%, increased by 7.4%. While the sales of readymade garment increased by 10.4% in both knitting and weaving fabrics which increased by 11.3% and 10.1% respectively.

□ **Export :** When comparing with the same month of the previous year, the sale volume of Textile fibers products decreased by 1.7% due to the decreasing demand from partner countries i.e. Turkey, Vietnam, Pakistan and US. The export values of fabric products increased by 6.0% from Vietnam, Cambodia, Indonesia and US. The export value of the readymade garments declined to be 9.9 % due to the decreasing order from major export markets such as Japan, US and EU which were affected from the obscure economic recovery.

3. Trend

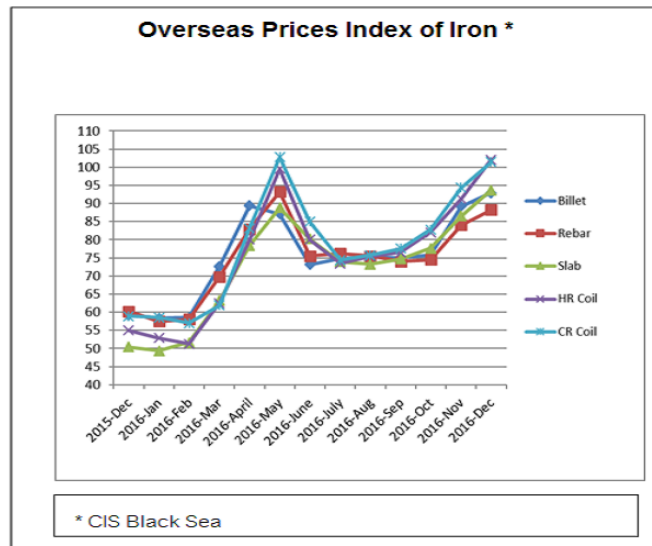
In overview, the production of fiber textile is anticipated to be expanded from increasing domestic demand. The production of fabric would be dropping, but still increasing in export from the demand of importing countries. The export of readymade garment is expected to be decreased from reducing purchase orders. In overview the export of fiber, fabric and readymade garment is expected to be slightly expanded as the economy growth rate of major partner countries such as EU and US is still slow down. However the well recognized in both quality and punctuality of shipment of Thai textile and garment would result in better opportunity for expanding and competition in the neighboring countries.



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III Iron and Steel Industry



1. Production

The manufacturing situation of steel industry in December 2016 improved when comparing with the same month of the previous year. The MPI in this month was at 133.12 with the increment rate of 24.89%. The domestic consumption volume was 1.47 million ton, increasing by 18.96%. This can be classified by product as :

- The MPI of the Flat steel production increased by 15.76%. The cold rolled sheet increases by 36.12%. The following was the galvanized steel sheet increased by 17.24%. The chrome plated sheet increased by 15.93%. The hot rolled sheet increases by 13.14%. This was due to the prices factor. In beginning of 2016, global prices of iron were reducing which during February – March was the lowest. However from mid year to the end of the year, prices of raw materials such as raw iron, charcoal have been increasing and consequently resulting in higher products' prices and production. Excepting for tin plat sheet decreased by 6.75% due to loss in price competition of local manufacturers to imported irons from China, South Korea and Taiwan. According to the data from the Iron and Steel Institute of Thailand, the domestic consumption of flat-steel products was 1,037,036 tons, increasing by 23.5% which mostly the hot plate sheets increased by 90.3%. Secondly tin plat sheet increased by 48.6% and Chrome plated sheet increased by 42.3%.
- The MPI of long-formed steel production increased by 36.40% respectively when comparing with the same

month of the previous year. The production of the round bar, reinforcing bar and wire rod increased by 46.21%, 37.30% and 32.21% respectively. The increasing production was for the government's infrastructure projects such as road construction, harbor development etc. It is expected that there will be many large projects that result in higher consumption steel bar product. However the projects of private sector were still unchanged due to oversupply of condominium market and hence reducing consumption of steel bar accordingly. According to the data from the Iron and Steel Institute of Thailand, the domestic consumption of long-formed steel was 591,425 tons, increased by 44.2%. The import volume was 265,796 tons, increasing by 31.8%. The export volume was 69,385 tons, decreased by 13.1%.

2. Steel Price

The international steel price index generated by the Iron and Steel Institute of Thailand indicated the change of price index (FOB) at CIS Black Sea ports in December 2016 when comparing with the same period of the previous year that the product with increasing price included the hot rolled sheet which increased from 54.97 to 102.05 point, up by 85.65%, of the flat steel beam increased from 50.46 to 93.66 point, up by 85.61%, of Cold rolled sheets increased from 58.87 to 101.40 point, up by 72.24%, of billet steel beam increased from 59.29 to 92.94 point, up by 56.75%, and of round bar increased from 60.21 to 88.29 point, up by 46.64%. The factor affecting the price increasing of the steel and metal was the rising prices of raw materials, such as charcoal.

3. Trend

Thailand's iron production situation in January 2017 is expected to be increasing by 9.74% when comparing the same month of the previous year due to the positive trend of construction industry, the infrastructure construction projects, the demand to rebuild housing for those whose houses were destroyed by natural disasters and the stimulus measurements for real estate industry such as title transferring and mortgage fee exemption or investment promotion in special economic zone.



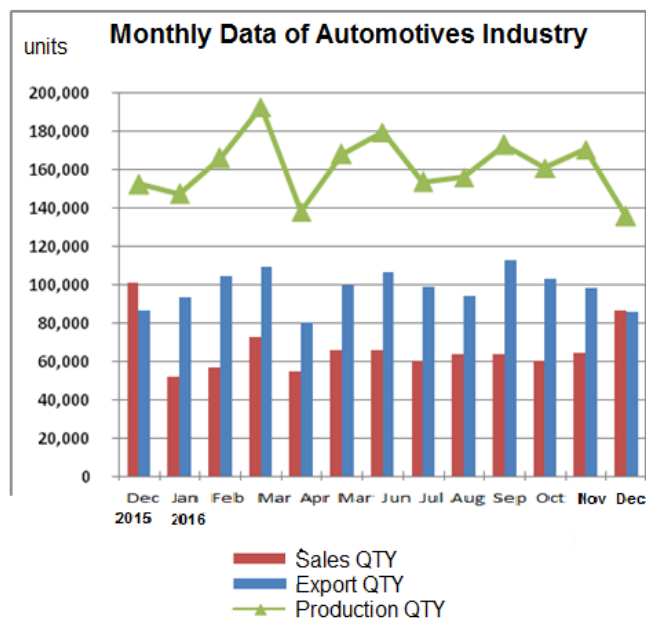
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IV. Automotive Industry

Automobile

The automobile industry was slow down in December 2016 when comparing with the same period of the year 2015 from shrinking of domestic and export market, due to the rushing of purchase at the end of last year (2015). Also the lower export was from the slowing down in purchase of the partner countries.



1. Production

Manufacturing quantity of automotive in December 2016 was 135,792 units which decreased from December 2015

by 11.07% (152,692 units). This was due to the decreasing of passing vehicles and pick-up truck and its derived component parts production.

2. Sales

Sales quantity of automobile in December 2016 was 85,858 units, lower than in December 2015 by 14.40% (101,464 units). This was due to the decrease of sales of passenger car, PPV and SUV vehicle.

3. Export

The export quantity in December 2016 was 86,120 units which decreased from December 2015 by 0.61% (86,650 units) due to the declining export to Middle East countries.

4. Trend

The automotive industry in January 2017 is expected to be slow down when comparing with January 2016. The production in January 2017 is expected to be 48% for domestic sales and 52% for export market.

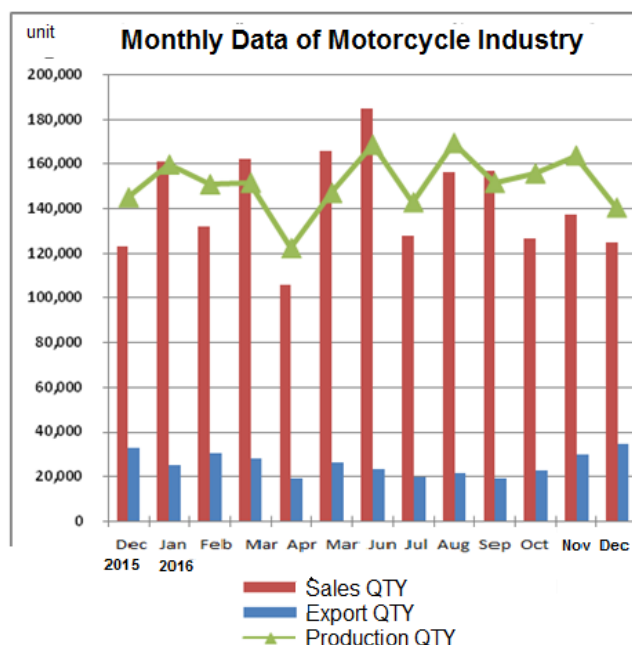


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Motorcycle

The Motorcycle industry in December 2016 was shrinking when comparing with the same period of 2015.



Note:

- 1) Since January 2016, the motorcycle production data has been revised by adding the information from on additional manufacture. Type of motorcycles from the data reports has been changed from family-type to versatile-type (family-type and scooters-type).
- 2) As from April 2016 data reports, the motorcycle types classification has been revised from family-type and scooters-type and sport-type to motorcycles types of : less than or equal to 100 cc, 101-125 cc, 126-150 cc and more than 150 cc types. Therefore, we can be able to compare only the overall growth rate.

1. Production¹

Manufacturing quantity of motorcycle in December 2016 was 140,147, decreasing by 3.71% from December 2015 which produced 144,736 units. Contribution was from the increasing production of sporty motorcycle.

2. Sales²

Sales quantity of motorcycles in December 2016 was 124,667 units, increasing by 1.59% from December 2015 which was sold 122,720 units.

3. Export of Complete Built Unit (CBU) motorcycle

The export quantity was 34,466 units in December 2016, increasing by 5.46% from December 2015 which exported 32,683 units. This was due to the increase of export to United State and United Kingdom.

4. Trend

The motorcycle industry in January 2017 is expected to be expanding when comparing with January 2016. The production in January 2017 is expected to be 87% for domestic sales and 13% for export market.

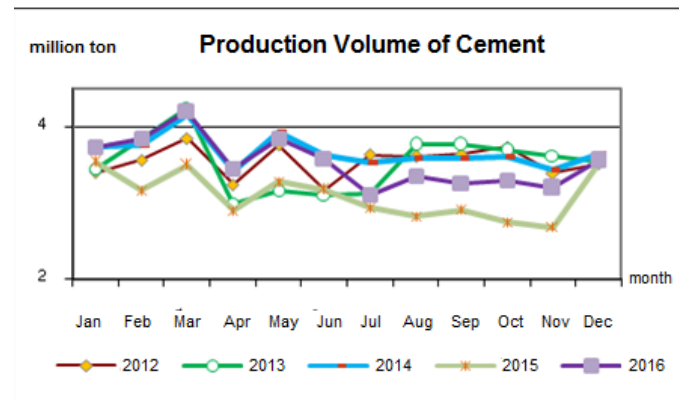


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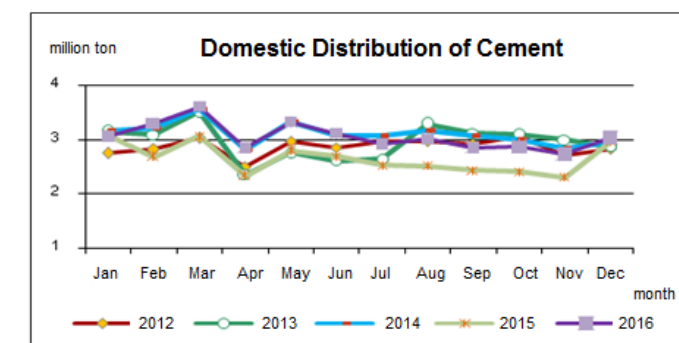
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V. Cement Industry

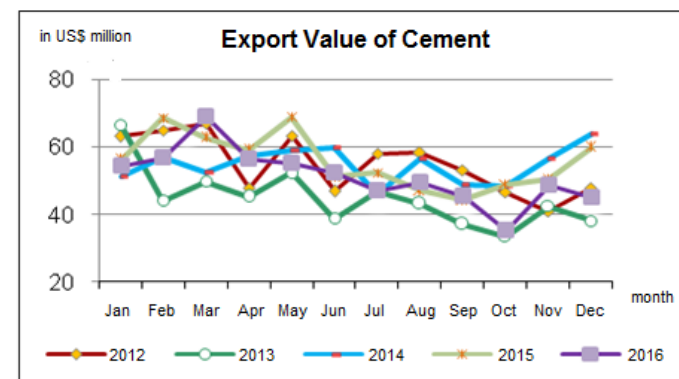
Overall growth of Cement industry expanded when comparing with the same period of the previous year in both production and domestic distribution from the growth trend of construction industry. The export value shrank due to the decreasing orders from Myanmar and Cambodia.



Source : Industrial Economics Information Center, Office of Industrial Economics



Source : Industrial Economics Information Center, Office of Industrial Economics



Source : Industrial Economics Information Center, Office of Industrial Economics

1. Production and Domestic Sales

When comparing with the same period of the previous year, the production and domestic sales volume of cement (excluding clinker cement) in December 2016 increased by 0.28% and 2.70% respectively.

Cement industry was expanding when comparing with the same period of the previous year. The first two left hand graphs demonstrate the growth of both production and domestic distribution and also had the highest monthly sales during past 5 years. It reflects the growth of local construction industry from the government's stimulus attempt with several measurements and the expedition of large scale infrastructure construction, such as the intercity motorways and the dual tracks railways with routes between Jira road – Khonkaen and Chacherngsao – Saraburi etc.

2. Export

The export value of cement in December 2016 shrank by 24.41% when comparing with the same period of the previous year as the decreasing orders from Myanmar who reduced its order value in line with its increasing cement production industry. However the first 3 export markets were still Bangladesh, Cambodia and Myanmar respectively at the gross value of US\$ 30.42 million, or 67.34% of total export value.

3. Trend

The production and domestic sales would be expanding from last month as it is the peak period of construction during the first quarter of the year. Also government's infrastructure projects are under fully-run construction from the beginning of the year. These increase the cement demand consequently.

The export value is anticipated to be declined when comparing with the same period of the previous year as Myanmar has continuously reduced its orders and demand from Thailand due to its cement production capacity expansion. The dependency rate in cement product of Myanmar on Thailand remains 30% of its gross domestic demand.



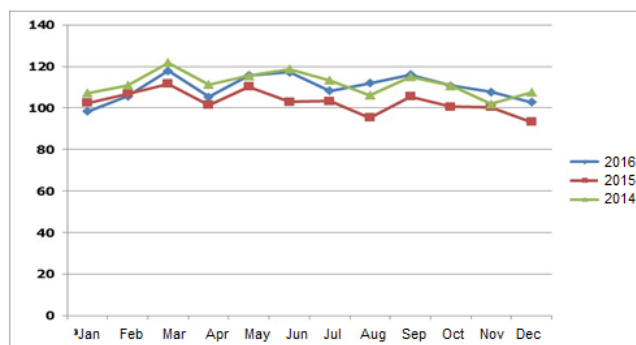
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VI. Electrical and Electronic Industry

In overview the manufacturing of electrical and electronic industry in December 2016 increased by 10.16% when comparing with the same month of the previous year. The electrical industry increased by 2.26% due to the growth of Air-conditioner and Refrigerator which increased up to 14.75%. The electronic industry increased by 14.75% due to the increase of production of Monolithic ICs, Other ICs and HDD.

MPI of Electricals and Electronics



Source : Office of Industrial Economics

Remark : The base year of 2011 has been applied to current MPI

Table 1: Top Value of Electrical Appliances and Electronic Products Exported in December 2016

Electrical / Electronic Products	Value (Million USD)	%YOY
Computer components	1,383.89	- 8.81
Integrated circuits	708.41	8.76
Air conditioners	298.30	11.54
VDO cameras & Digital cameras	284.50	43.63
Total of electrical / electronic product	4,555.96	5.61

Source: The Electrical and Electronics Institute
source: Institute of Electrical and Electronic

1. Production

In overview the MPI of the electrical and electronic industry in December 2016 when comparing with the same period of the previous year was at 102.74, up by 10.16%.

The MPI of electrical industry sector was at 91.41, up by 2.29%. The expanding electrical appliance included condensing unit split-type air conditioner, refrigerator, microwave, electrical cable and television increased by 6.50%, 5.68%, 6.59%, 16.33% and 10.25% respectively. The exported sales of air-conditioner to major countries i.e. China, ASEAN and US were increased by 29.13%, 12.35% and 6.09% respectively. The export to major markets of washing machine, which some manufactures expanded their production capacity and started their production in August 2016, was significantly increasing especially to US markets.

When comparing with the same period of the previous year, the MPI of the electronic industry sector was at 109.80, increasing by 14.75% due to the increasing production of Monolithic ICs, Other ICs and HDD by 17.26%, 16.62%, 8.05% and 10.25% respectively. As ICs was the essential parts for higher technology product development, thus the export of all items to all major countries was increased.

2. Export

Total export value of the electrical appliance product and electronic industry in December 2016 was US\$ 4,555.96 million, decreasing by 5.61% when comparing with the same month of the previous year.



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Electrical Appliance Product

When comparing with the same month of the previous year, the electrical appliance product had the export value of US\$ 1,913.65 million with the increase of 15.02%. This was due to the increase of export to all major markets i.e. China, US, Japan, ASEAN and EU which increased by 25.75%, 19.45%, 14.03, 11.54 and 5.15% respectively. The leading product with most export value was air conditioners with export amount of US\$ 298.30 million, up by 11.54%. This was due to the increase of export to major countries i.e. China, ASEAN and US, by 29.13%, 12.35% and 6.09% respectively. The following product was electrical circuit switching and protection device including base and control panel with export amount of US\$ 284.50 million, down by 43.63%. This was due to the export decreased to the major markets such as China, US, Japan, EU and ASEAN, by 82.98%, 48.86%, 28.61%, 24.41 and 5.48% respectively.

Electronic product

When comparing with the same month of the previous year, the electronic product had the export value of US\$2,642.31 million, decreased by 0.29%. This was due to the decrease of export to key markets as such as EU and US markets, by 12.24% and 4.14%. The leading electronic product with most export value was components of computer which had export amount of US\$1,383.89 million, dropped by 8.81%. This was due to the decrease of export to major markets such as EU, US and China by 17.66%, 14.29% and 1.08% respectively. The following product was Electrical Circuit Board (ECB) with export amount of US\$ 708.41 million, increasing by 8.76%. This was due to the increasing export to all major markets i.e. China, ASEAN, US, EU and Japan by 48.99%, 18.86%, 15.34, 5.05 and 2.27% respectively.

3. Trend

From the index guide model conducted by the Electrical and Electronics Institute, the overview of the MPI of electrical and electronic industry in January 2017 is anticipated to be at 114.2, increasing by 16.16% when comparing with the same month of the previous year. The MPI of electrical industry is expected to be at 119.30, increasing by 1.67% from the increasing of Microwave oven, electrical rice cooker, electrical cable and condensing unit split-type air conditioner, which would expand in both domestic market and export to major markets.

The MPI of electronic industry is expected to be at 111.01, rising up by 28.42%. This is due to the increasing of semi-conductor, other ICs, Monolithic and ICs for hi-tech product development and HDD's export would be increasing to major countries.