

At present the structure of business trade, services and industrial activity, has changed dramatically. There are new kind of business in the economy, including the small scale industries and home industry which has a role in the economic growth of the country as a whole increased. Therefore, statistical data on basic information of the business is important and necessary for the public and private sector in policy formulation and development planning of economic and industry in both the national and provincial level, to increase competitiveness in the global trade arena. The National Statistical Office (NSO) proposed by the key government agencies, including the Office of Industry Economics, the Ministry of Industry, Office of the National Economic and Social Development Board, Bank of Thailand and the Ministry of Commerce, to conduct the Industrial Census every 5 years, there for, the basic information obtained by the census can be used for both government and private sectors in various aspects.

The NSO had carried The Business trade and Services Census for 3 times, in 1966 and 1988 and 2002. The Industrial Census had been conducted 3 times as well, in 1964 and 1997, in 2007. For the year 2012 will mature around 10 years for conducting the Census of Business trade and Services and 5 years for conducting the Census of Industrial. The NSO had integrated of such a census named “The 2012 Business trade and Industrial Census”.

The data presents in this report was the results of the 2012 Business and Industrial Census: Manufacturing Industry. The statistical methodology using for the establishments with 1 – 10 persons engaged were a sample survey and for the establishment with 11 persons engaged and over were completely enumerated. The enumeration stage, field work was conducted during May 1 to August 30, 2011. The data presented the operational information of manufacturing establishment in **Central region** in the year 2011 (January 1 – December 31, 2011) and classified by Thailand Standard Industrial Classifications (TSIC-2009). The main findings are as follows:

Number of establishments by division of industry

The results of the 2012 Business and Industrial Census, there were totally 46,624 **manufacturing** establishments in the Central region. The highlight industries of this region were *manufacture of food products* and *Manufacture of wearing apparels*. There were about 19.7 and 16.3 percent respectively. The followings were *Manufacture of fabricated metal products (excepts machinery and equipment* (about 11.9 percent), *other manufacture* (about 10.9 percent) and *Manufacture of wood and products of wood and cork (except furniture); manufacture of articles of straw and plaiting materials* (about 10.7 percent) The other divisions of industry, not mentioned above, each division had less than 6.0 percent.

Figure A Percentage of manufacturing establishments by division of industry

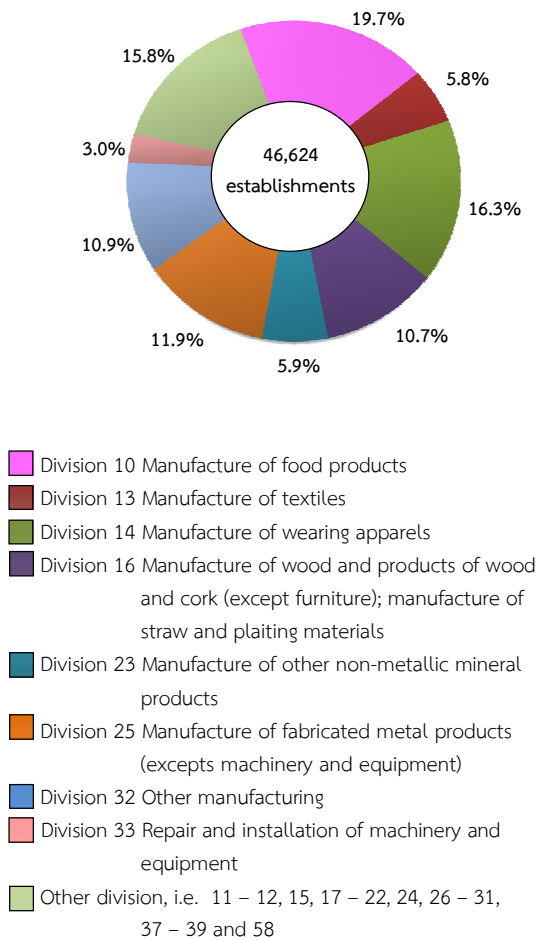
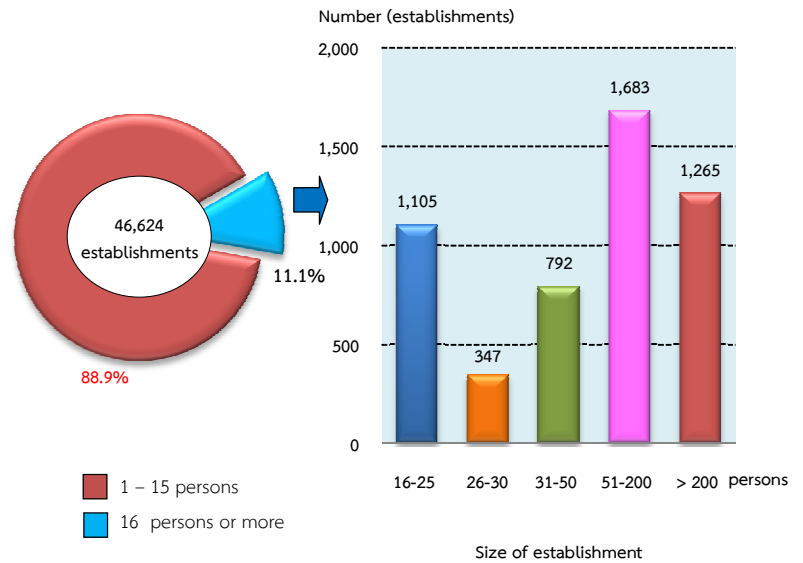


Figure B Number of manufacturing establishments by size of establishments (number of persons engaged)



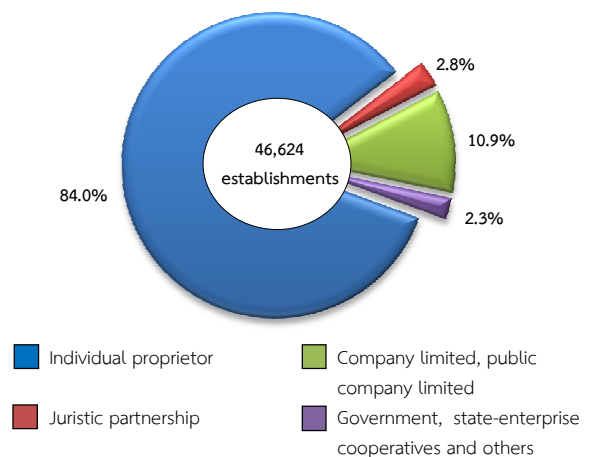
Form of legal organization

Most establishments (about 84.0 percent) were individual proprietor. The establishments, which were in the form of company limited, public company limited was about 10.9 percent. For those, which were juristic partnership and government, state - enterprise had close proportions, of about 2.8 and 2.3 percent respectively.

Size of establishment

Most of manufacturing establishments (about 88.9 percent or 41,432 establishments) were establishments with 1 – 15 persons engaged. The establishments with 16 persons or more were about 11.1 percent or 5,192. Of this number, establishments with 51 – 200 persons was about 1,683. Those establishments with more than 200 persons were about 1,265. While the establishments with 26 – 30 persons was about 347.

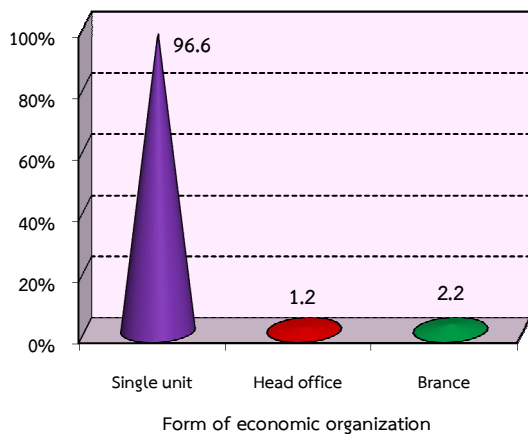
Figure C Percentage of manufacturing establishments by form of legal organization



Form of economic organization

The manufacturing establishments in the Central region (about 96.6 percent) were in form of single unit. About 2.2 percent was an office branch or subsidiary and about 1.2 percent was head office.

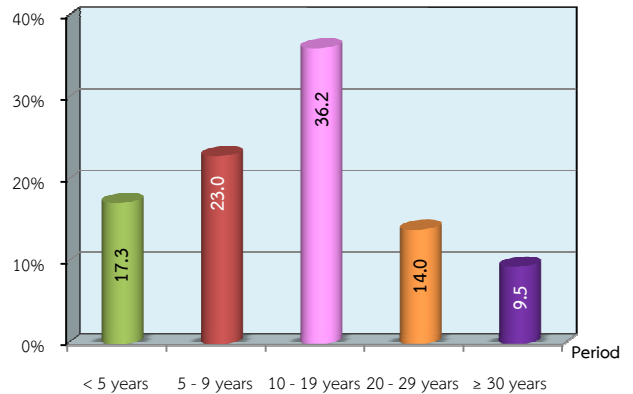
Figure D Percentage of manufacturing establishments by form of economic organization



Period of operation

Most of the establishments (about 36.2 percent) have operated their business for 10 – 19 years. The establishments operated their business for 5 – 9 years and less than 5 years were about 23.0 and 17.3 percent respectively. The establishments operated their business for 20 – 29 years was about 14.0 percent. While the establishments operated their business for 30 years or more had the lowest proportion of about 9.5 percent of the total.

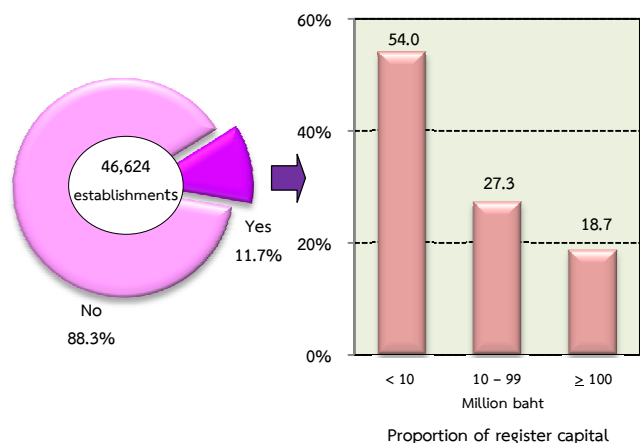
Figure E Percentage of manufacturing establishments by period of operation



Register capital

The number of manufacturing establishments in the Central region with registered were about 11.7 percent of the total. Out of these, most of them (about 54.0 percent) had less than 10 million baht of registered capital. Those with 10 – 99 million baht of registered were about 27.3 percent. The establishment with 100 million baht of registered and over was only 18.7 percent.

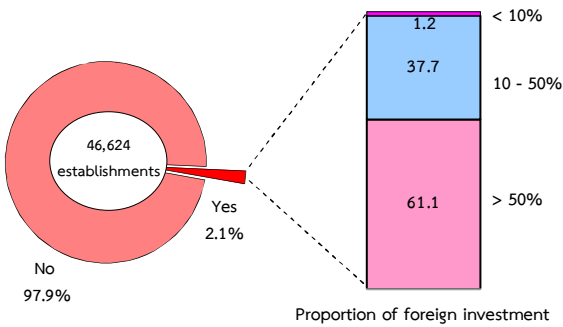
Figure F Percentage of manufacturing establishments by register capital



Foreign investment or share holding

For the foreign investment or share holding in the Central region, corporate establishment (company limited, public company limited) had about 97.9 percent had no for the foreign investment or share holding. For the establishment with for the foreign investment or share holding about 2.1 percent did. Out of these, about 61.1 percent was over 50% of share holding and about 37.7 percent was 10 – 50% of share holding. The rest of about 1.2 percent was less than 10% share holding.

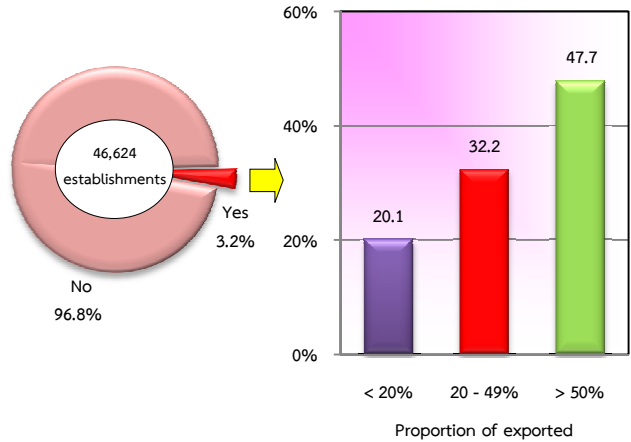
Figure G Percentage of manufacturing establishments by foreign investment or share holding



Export

There were 3.2 percent of manufacturing establishment, which exported their goods produced. Out of these, about 47.7 percent, exported over 50% of total sales. About 32.2 percent of establishment exported between 20 – 49%. The rest about 20.1 percent exported less than 20%.

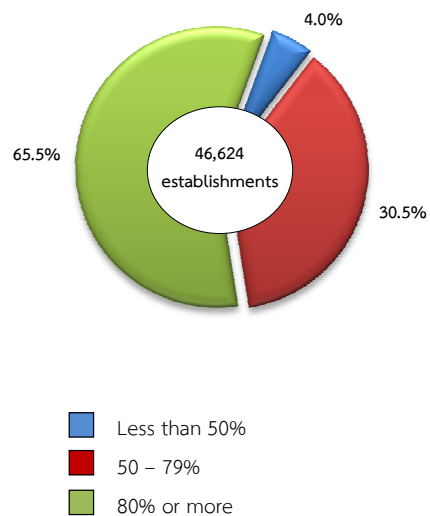
Figure H Percentage of manufacturing establishments by export



Capacity utilization rate

The average capacity utilization rate in 2011 of manufacturing establishments was about 81.6%. The majority of manufacturing establishments (about 65.5 percent) had capacity utilization rate about 80% or more. The establishment with the capacity utilization rate between 50 – 79% was about 30.5 percent. While those with capacity utilization rate less than 50% was about 4.0 percent.

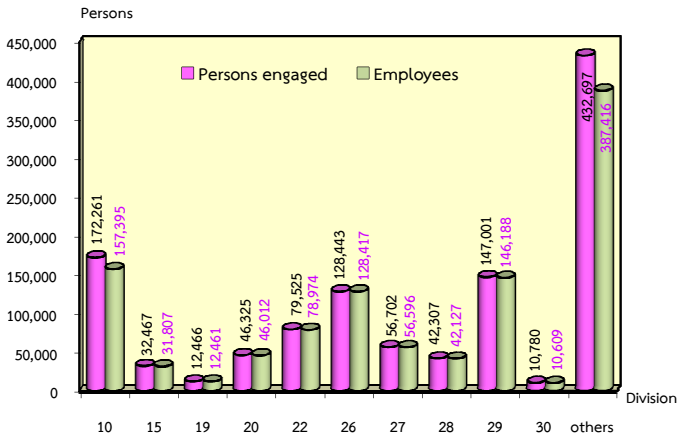
Figure I Percentage of manufacturing establishments by capacity utilization rate



Number of persons engaged and employees

In 2011 the workers of the manufacturing establishments in the Central region were totally 1.2 million persons. In term of employees, there were totally 1.1 million persons. Most of them about 14.3 percent worked in *manufacture of food products*. Followed by those worked in *Manufacture of motor vehicles, trailers and semi-trailers* was about 13.3 percent, *Manufacture of computers, electronic and optical products* was about 11.7 percent. The other division of industry not mentioned above, each division had less than 8.0 percent.

Figure J Number of persons engaged and employees of manufacturing establishments by division of industry



Note : Persons engaged refer to owner or juristic partnerships unpaid worker and employees.

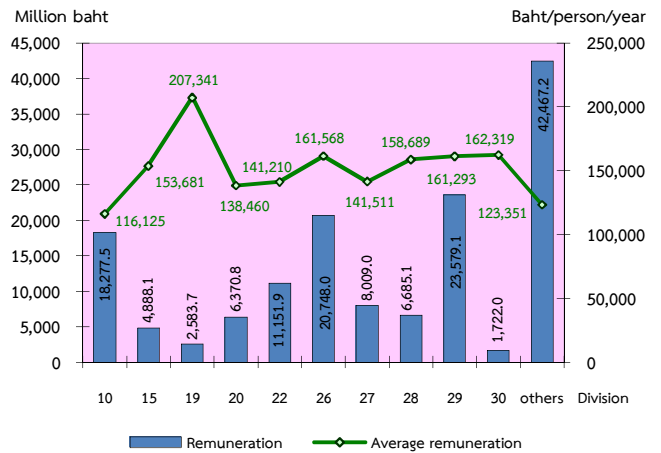
Division of industry:

- Division 10 Manufacture of food products
- Division 15 Manufacture of leather and related products
- Division 19 Manufacture of coke and refined petroleum products
- Division 20 Manufacture of chemicals and chemical products
- Division 22 Manufacture of rubber and plastic products
- Division 26 Manufacture of computer, electronic and optical Products
- Division 27 Manufacture of electrical equipment
- Division 28 Manufacture of machinery and equipment, n.e.c
- Division 29 Manufacture of motor vehicles, trailers and semi-trailers
- Division 30 Manufacture of other transport equipment
- Other division, i.e. 11 – 14, 16 – 18, 21, 23, 24 – 25, 31 - 33, 37 – 39 and 58

Remuneration

In 2011 the employees working in manufacturing establishments in the Central region received the total remuneration about 151,811.6 million baht or 138,245 baht per person annually. The employees engaged in *Manufacture of coke and refined petroleum products* received the highest annual remuneration, of about 207,341 baht per person. Followed by those employees engaged in *Manufacture of other transport equipment* received the annual remuneration about 162,319 baht per persons. The *waste collection, treatment and disposal activities; materials recovery* received the lowest annual remuneration, of about 82,523 baht per persons.

Figure K Remuneration of manufacturing establishments by division of industry



Division of industry:

- Division 10 Manufacture of food products
- Division 15 Manufacture of leather and related products
- Division 19 Manufacture of coke and refined petroleum products
- Division 20 Manufacture of chemicals and chemical products
- Division 22 Manufacture of rubber and plastic products
- Division 26 Manufacture of computer, electronic and optical Products
- Division 27 Manufacture of electrical equipment
- Division 28 Manufacture of machinery and equipment, n.e.c
- Division 29 Manufacture of motor vehicles, trailers and semi-trailers
- Division 30 Manufacture of other transport equipment
- Other division, i.e. 11 – 14, 16 – 18, 21, 23 – 25, 31 – 33, 37 – 39 and 58

Value of gross output, intermediate consumption and value added

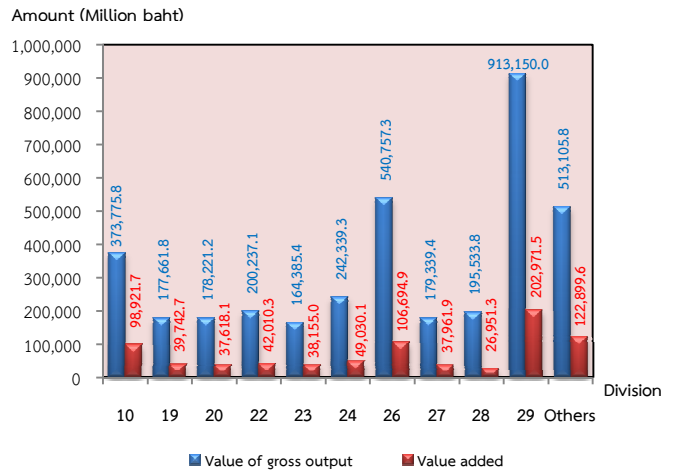
In 2011, the value of gross output of manufacturing establishments was totally 3.7 trillion baht. The intermediate consumption was totally 2.9 trillion baht. The value added was totally 802,973.3 million baht. Comparing the value added to value of gross output was about 21.8 percent.

For the average value of gross output were about 78.9 million baht per establishment and 3.2 million baht per person. In terms of the average value added, these were about 17.2 million baht per establishment and 691,537 baht per person respectively.

Considering by division of industry, it was found that establishments engaged in *Manufacture of coke and refined petroleum products* had the highest average value of gross output per establishment about 4,441.5 million baht and average value of gross output per person about 14.3 million baht.

For the establishments engaged in *Manufacture of coke and refined petroleum products* had the highest average value added per establishment and per person had about 993.6 million baht and 3.2 million baht respectively. The following engaged in *Manufacture of computers, electronic and optical products* had average value added per establishment, of about 389.4 million baht. While *Waste collection, treatment and disposal activities; materials recovery* had average value added per person had about 2.3 million baht.

Figure L Value of gross output and value added of manufacturing establishments by division of industry



Value added = Value of gross output – Intermediate consumption
 Value of gross output refers to receipts of establishment in 2006
 Intermediate consumption refers to all expenses on the production process of goods or services in the establishment in 2011

Division of industry:

- Division 10 Manufacture of food products
- Division 19 Manufacture of coke and refined petroleum products
- Division 20 Manufacture of chemicals and chemical products
- Division 22 Manufacture of rubber and plastic products
- Division 23 Manufacture of other non-metallic mineral products
- Division 24 Manufacture of basic metals
- Division 26 Manufacture of computer, electronic and optical products
- Division 27 Manufacture of electrical equipment
- Division 28 Manufacture of machinery and equipment, n.e.c
- Division 29 Manufacture of motor vehicles, trailers and semi-trailers
- Other division, i.e. 11 – 18 – 21, 25, 30 – 33, 37 – 39 and 58

Data comparison of manufacturing establishments during 5 years

Comparing the data of the 2012 Business and Industrial Census and the 2007 Industrial Census, which the operation period was of the year in 2011 and 2006, the results showed that number of manufacturing establishment increased by 0.6 percent and number of persons engaged increased by 2.7 percent, while the average number of person engaged per establishment increased by 2.1 percent.

Table A Principal data of manufacturing establishments in year 2006 and 2011

Data items	2006	2011	% change
Number of establishments (Establishments)	46,338	46,624	0.6
Number of persons engaged (Persons)	1,130,615	1,161,143	2.7
<i>Average establishment (Persons)</i>	<i>24.4</i>	<i>24.9</i>	<i>2.1</i>
Number of employees (Persons)	1,063,087	1,098,134	3.3
<i>Average establishment (Persons)</i>	<i>22.9</i>	<i>23.6</i>	<i>3.1</i>
Remuneration (Million baht)	133,162.9	151,811.6	14.0
<i>Average annual per employee (Baht)</i>	<i>125,260.6</i>	<i>138,245.1</i>	<i>10.4</i>
Value of gross output (Million baht)	2,878,552.9	3,678,573.5	27.8
<i>Average per establishment (Thousand baht)</i>	<i>62,120.8</i>	<i>78,898.7</i>	<i>27.0</i>
<i>Average per person (Thousand baht)</i>	<i>2,546.0</i>	<i>3,168.1</i>	<i>24.4</i>
Intermediate consumption (Million baht)	2,222,761.7	2,875,600.3	29.4
<i>Average per establishment (Thousand baht)</i>	<i>47,968.4</i>	<i>61,676.4</i>	<i>28.6</i>
<i>Average per person (Thousand baht)</i>	<i>1,966.0</i>	<i>2,476.5</i>	<i>26.0</i>
Value added (Million baht)	655,791.2	802,973.3	22.4
<i>Average per establishment (Thousand baht)</i>	<i>14,152.3</i>	<i>17,222.3</i>	<i>21.7</i>
<i>Average per person (Thousand baht)</i>	<i>580.0</i>	<i>691.5</i>	<i>19.2</i>

In terms of employment, number of employees and average number of employees per establishment increased about 3.3 and 3.1 percent respectively and the annual remuneration during 5 year increased by 14.0 percent.

For the value of gross output, intermediate consumption and value added of manufacturing establishments during 5 year increased by 27.8, 29.4 and 22.4 percent respectively.

The performance of establishments in the Central region during 5 years has gradually grown due to the world economy slowed down and the flood crisis in the central region.

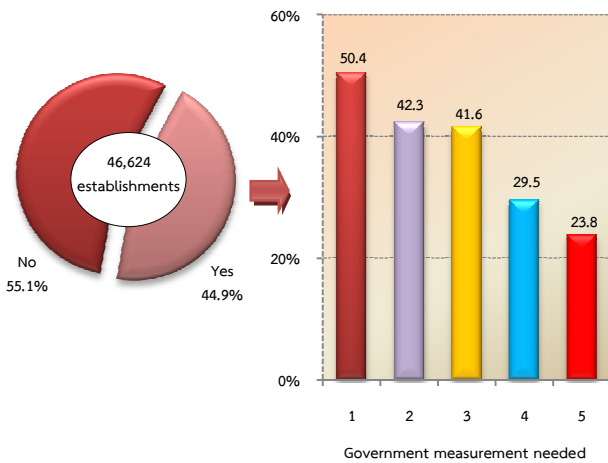
Data summary and recommendation

The results of the 2012 Business and Industrial Census show that there were totally 46,624 manufacturing establishments in the Central region. Most of them engaged in establishments with 1 – 15 persons, of about 88.9 percent. The highlight industry was *manufacture of food products* (about 19.7 percent). There were totally 1.2 million persons and out of these, about 1.1 million persons were employees. They received the annual remuneration, of about 138,245 baht per person. The manufacturing establishments contributed value of gross output and intermediate consumption of about 3.7 and 2.9 trillion respectively. For value added was about 802,973.3 million baht

● **Governments measurement needed**

For the manufacturing establishments in the Central region had no government measurement needed (about 55.1 percent), the rest of about 44.9 percent did. The top 5 measurements needed are reduce cost of production (about 50.4 percent), providing the low interest of loan (about 42.3 percent), promote establishments investment (about 41.6 percent), and expand the market (about 29.5 percent), Increase in credit amount for the entrepreneurs (about 23.8 percent) respectively.

Figure M Percentage of manufacturing establishments by government measurement needed the top 5



Note: The establishment can be done by more than 1

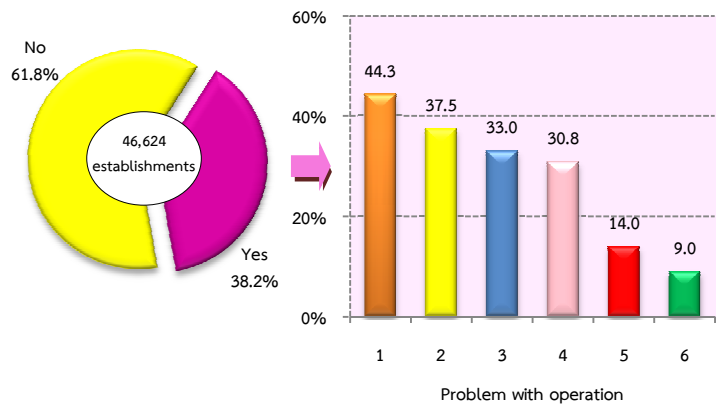
Government measurement needed:

1. Investment promotion to operators
2. Reduce production cost
3. Find out the low interest of loan
4. Expand the market for buy purchase
5. Provide training and skills employee development

● **Problem with operation**

The establishment, about 38.2 percent reported the problems in their operation. Most of them about 44.3 percent inadequate capital. The followings were product marketing, raw materials shortages used in the production and labour shortage were about 37.5, 33.0 and 30.8 percent respectively. While the uncertainty of government trade policy was about 14.0 percent.

Figure N Percentage of manufacturing establishments by problem with operation



Note: The establishment can be done by more than 1

Problem with operation:

1. Inadequate capital
2. Product market
3. Raw material shortages used in the production
4. Labor shortage
5. Uncertainty of government trade policy
6. Other