

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 **Northern 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 97,129 **manufacturing** establishments in the Northern region. The highlight industries of this region were *manufacture of wood and products of wood and cork (except furniture); manufacture of articles of straw and plaiting materials* and *manufacture of food products*. There were about 23.3 and 20.7 percent respectively. The followings were *manufacture of wearing apparels* (about 17.6 percent) *manufacture of textiles, manufacture of fabricated metal products (excepts machinery and equipment)* and *other manufacture* were about 8.3, 5.8 and 5.6 percent respectively. The other divisions of industry, not mentioned above, each division had less than 4.0 percent.

Figure A Percentage of manufacturing establishments by division of industry

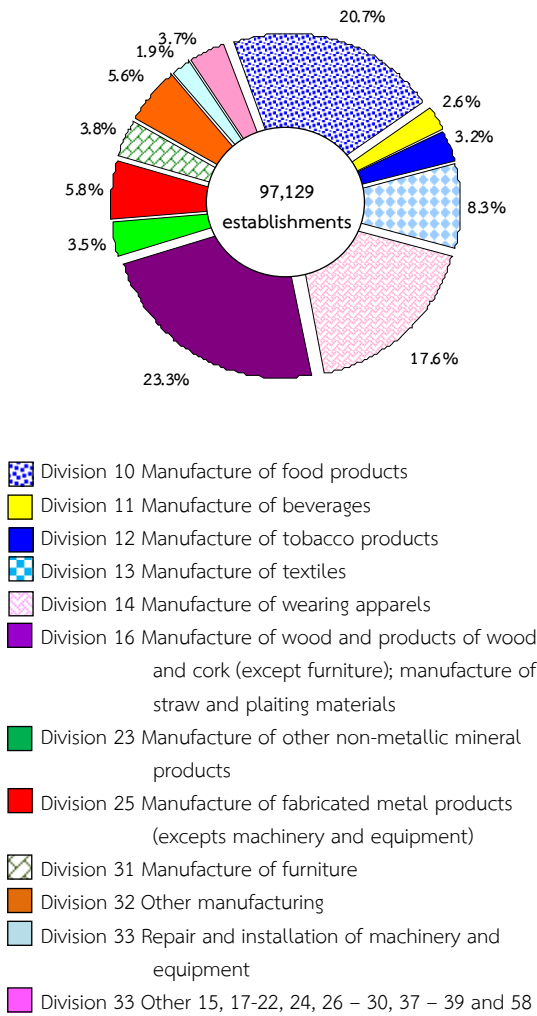
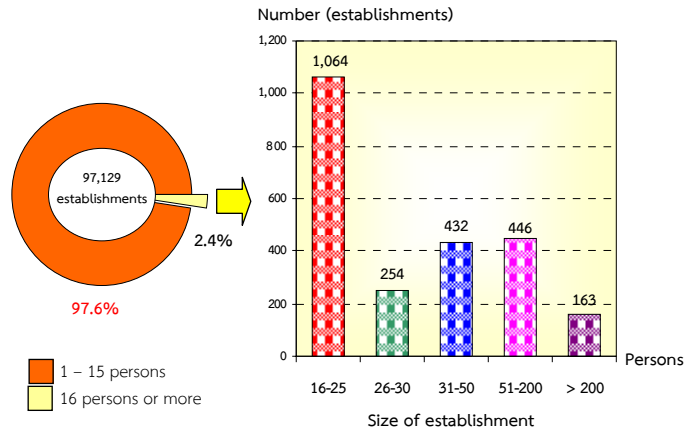


Figure B Number of manufacturing establishments by size of establishments (number of persons engaged)



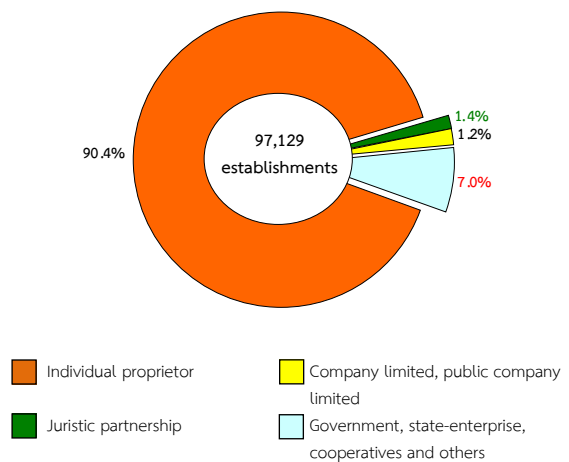
### Size of establishment

Most of manufacturing establishments (about 97.6 percent or 94,770 establishments) were establishments with 1 – 15 persons engaged. The establishments with 16 persons or more were about 2.4 percent or 2,359 establishments of this number, establishments with 16 – 25 persons, 51 – 200 persons, 31 – 50 persons were about 1,064, 446 and 432 establishments respectively. The establishments with 26 – 30 more than 200 persons were about 254 and 163 establishments respectively.

### Form of legal organization

Most establishments (about 90.4 percent) were individual proprietor. The establishments, which were in the form of government, state-enterprise, cooperatives and other was about 7.0 percent. For those, which were juristic partnership and company limited, public company limited had proportions, of about 1.4 and 1.2 percent respectively.

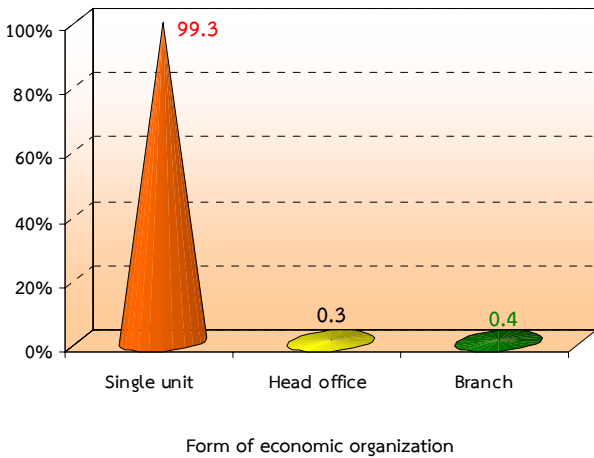
Figure C Percentage of manufacturing establishments by form of legal organization



**Form of economic organization**

The manufacturing establishments in the Northern region (about 99.3 percent) were in form of single unit. About 0.4 percent was an office branch or subsidiary and about 0.3 percent was head office.

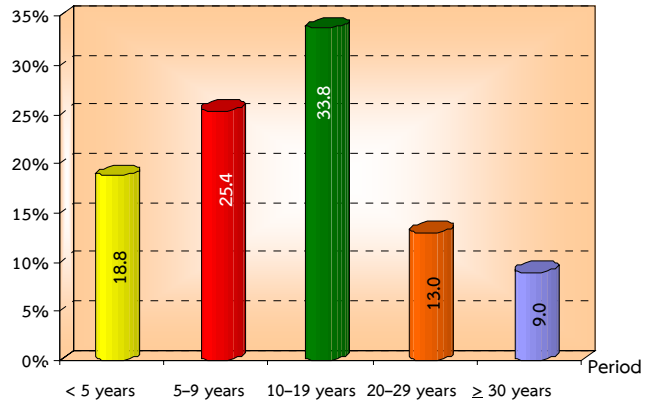
**Figure D Percentage of manufacturing establishments by form of economic organization**



**Period of operation**

Most of the establishments (about 33.8 percent) have operated their manufacturing for 10 – 19 years. The establishments operated their manufacturing for 5 – 9 year and less than 5 years were about 25.4 and 18.8 percent respectively. The establishments operated their manufacturing for 20 – 29 years was about 13.0 percent. While the establishments operated their manufacturing for 30 years or more had the lowest proportion of about 9.0 percent of the total.

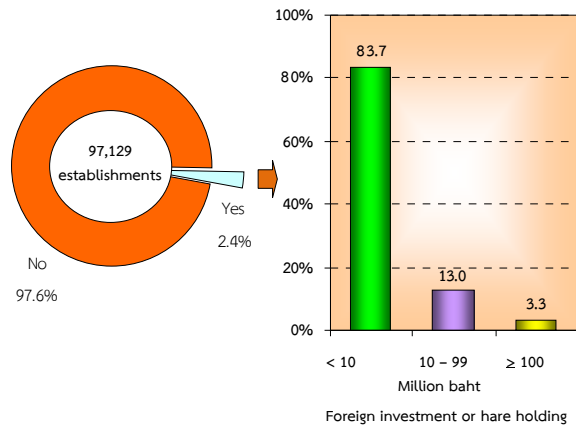
**Figure E Percentage of manufacturing establishments by period of operation**



**Register capital**

The number of manufacturing establishments in the Northern region with registered were about 2,317 establishments or about 2.4 percent of the total. Out of these, most of them (about 83.7) had less than 10 million baht of registered capital. Those with 10 – 99 million baht of registered were about 13.0 percent. The establishment with 100 million baht of registered and over was only 3.3 percent.

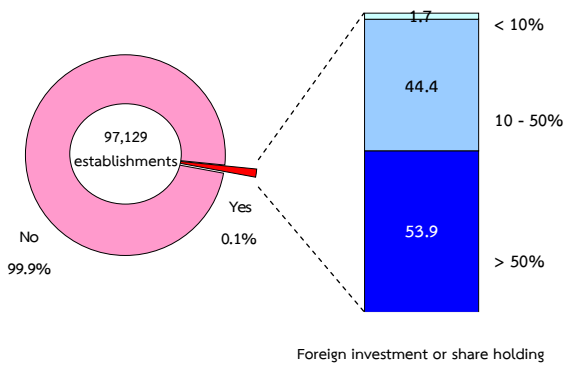
**Figure F Percentage of manufacturing establishments by foreign investment or share holding**



### Foreign investment or share holding

For the foreign investment share holding in the Northern region, form corporate establishment (company limited and public company limited) had about 99.9 percent had no foreign investment or share holding. For the establishments with foreign share holding about 0.1 percent did. Out of these, about 53.9 percent was over 50% of share holding and between 10 - 50% and less than 10% of share holding about 44.4 and 1.7 percent respectively.

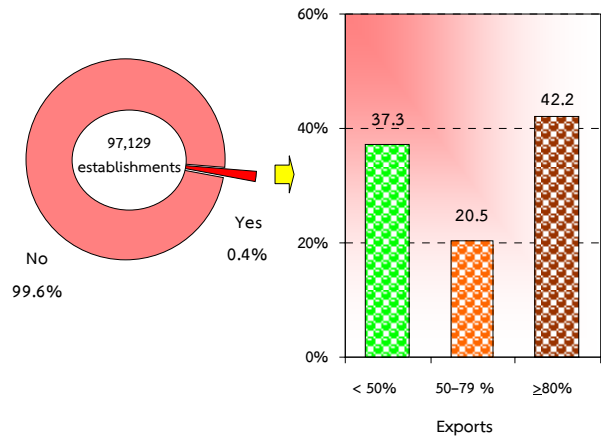
Figure G Percentage of manufacturing establishments by foreign investment or share holding



### Export

For the export of goods of manufacturing establishments, there were only 350 establishments or 0.4 percent. Out of these, about 42.2 percent. Exported with over 80% of the total sales of goods produced about 37.3 had the proportion of exported less than 50%. The rest of about 20.5 percent with exported between 50 - 79%.

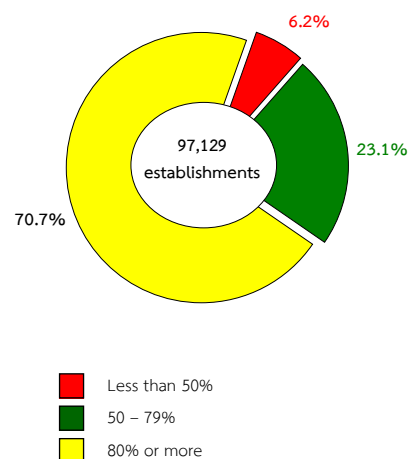
Figure H Percentage of manufacturing establishments by export



### Capacity utilization rate

The average capacity utilization rate in 2011 of manufacturing establishments was about 83.5%. The majority of manufacturing establishments (about 70.7 percent) had capacity utilization rate about 80% or more. The establishment with the capacity utilization rate between 50 - 79% was about 23.1 percent. While those with capacity utilization rate less than 50% was about 6.2 percent.

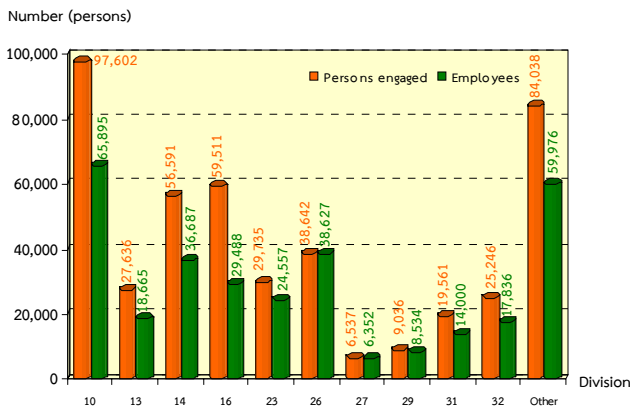
Figure I Percentage of manufacturing establishments by capacity utilization rate



### Number of persons engaged and employees

In 2011 the workers of the manufacturing establishments in the Northern region were totally 454,134 persons. In term of employees, there were totally 320,616 persons. Most of them about 20.6 percent worked in *manufacture of food products*. Followed by those worked in *manufacture of computer, electronic and optical products* and *manufacture of electrical equipment* received annual remuneration higher than the other, of about 134,741 and 134,178 baht per person respectively. Those engaged in *manufacture of motor vehicles, trailers and semi-trailers* received the annual remuneration about 133,997 baht per persons.

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.

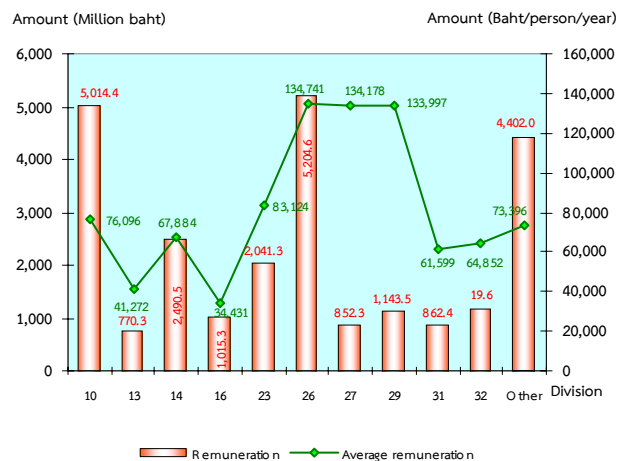
#### Division of industry:

- Division 10 Manufacture of food products
- Division 13 Manufacture of textiles
- Division 14 Manufacture of wearing apparels
- Division 16 Manufacture of wood and of products of wood and cork (except furniture); manufacture of articles of straw and plaiting materials
- Division 23 Manufacture of other non-metallic mineral products
- Division 26 Manufacture of computer, electronic and optical products
- Division 27 Manufacture of motor vehicles, trailers and semi-trailers
- Division 31 Manufacture of furniture
- Division 32 Other manufacturing
- Others 11-12, 15, 17 - 22, 24 - 25, 28, 30, 33, 37 - 39 and 58

### Remuneration

In 2011 the employees working in manufacturing establishments in the Northern region received the total remuneration about 24,971.8 million baht or 77,887 baht per person annually. The employees engaged in *manufacture of computer, electronic and optical products* and *manufacture of electrical equipment* received annual remuneration higher than the other, of about 134,741 and 134,178 baht per person respectively. Those engaged in *manufacture of motor vehicles, trailers and semi-trailers* received the annual remuneration about 133,997 baht per persons.

Figure K Remuneration of manufacturing establishments by division of industry



#### Division of industry:

- Division 10 Manufacture of food products
- Division 13 Manufacture of textiles
- Division 14 Manufacture of wearing apparels
- Division 16 Manufacture of wood and of products of wood and cork (except furniture); manufacture of articles of straw and plaiting materials
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**Value of gross output, intermediate consumption and value added**

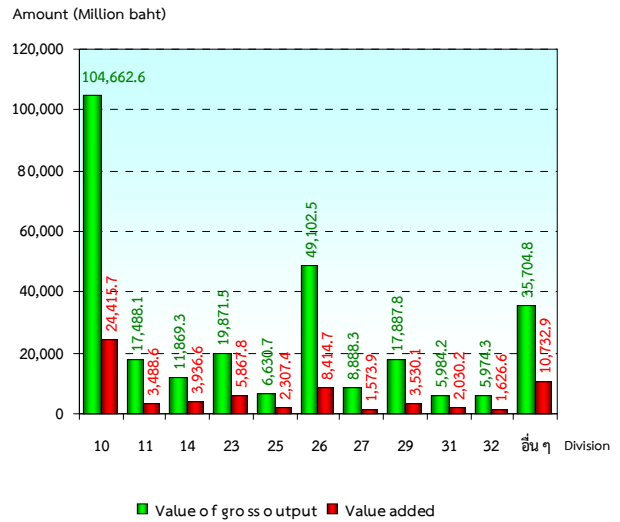
In 2011, the value of gross output of manufacturing establishments was totally 284,064.0 million baht. The intermediate consumption and value added were totally 216,139.8 and 67,924.2 million baht respectively. Comparing the value added to value of gross output was about 23.9 percent.

For the average value of gross output were about 2.9 million baht per establishment and 625,507 baht per person. In terms of the average value add, these were about 699,319 baht per establishment and 149,569 baht per person respectively.

Considering by division of industry, it was found that establishments engaged in *manufacture of computer, electronic and optical products* had the highest average value of gross output per establishment about 1,044.7 million baht and average value of gross output per person about 1.3 million baht respectively.

For the establishments engaged in *manufacture of computer, electronic and optical products* had the highest average value added per establishment and per person had about 179.0 million baht and 217,760 baht respectively. The following engaged in *manufacture of electrical equipment* had average value of gross output and average value added per person, of about 11.3 million baht and 240,768 baht respectively.

**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 11 Manufacture of beverages
- Division 14 Manufacture of wearing apparels
- Division 23 Manufacture of other non-metallic mineral products
- Division 26 Manufacture of computer, electronic and optical products
- Division 27 Manufacture of motor vehicles, trailers and semi-trailers
- Division 31 Manufacture of furniture
- Division 32 Other manufacturing
- Others 11-12, 15, 17 – 22, 24 - 25, 28, 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 and number of persons engaged increased by 5.3 and 15.6 percent respectively, while the average number of person engaged per establishment increased by 9.3 percent.

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

Data items	2006	2011	% Change
<b>Number of establishments (Establishments)</b>	<b>92,210</b>	<b>97,129</b>	<b>5.3</b>
<b>Number of persons engaged (Persons)</b>	<b>392,704</b>	<b>454,134</b>	<b>15.6</b>
<i>Average establishment (Persons)</i>	<i>4.3</i>	<i>4.7</i>	<i>9.3</i>
<b>Number of employees (Persons)</b>	<b>225,452</b>	<b>320,616</b>	<b>42.2</b>
<i>Average establishment (Persons)</i>	<i>2.4</i>	<i>3.3</i>	<i>37.5</i>
<b>Remuneration (Million baht)</b>	<b>16,807.6</b>	<b>24,971.8</b>	<b>48.6</b>
<i>Average annual per employee (Baht)</i>	<i>74,549.2</i>	<i>77,886.9</i>	<i>4.5</i>
<b>Value of gross output (Million baht)</b>	<b>216,357.4</b>	<b>284,064.0</b>	<b>31.3</b>
<i>Average per establishment (Thousand baht)</i>	<i>2,346.4</i>	<i>2,924.6</i>	<i>24.6</i>
<i>Average per person (Thousand baht)</i>	<i>550.9</i>	<i>625.5</i>	<i>13.5</i>
<b>Intermediate consumption (Million baht)</b>	<b>174,303.4</b>	<b>216,139.8</b>	<b>24.1</b>
<i>Average per establishment (Thousand baht)</i>	<i>1,890.3</i>	<i>2,225.3</i>	<i>17.7</i>
<i>Average per person (Thousand baht)</i>	<i>443.9</i>	<i>475.9</i>	<i>7.2</i>
<b>Value added (Million baht)</b>	<b>42,054.0</b>	<b>67,924.2</b>	<b>61.5</b>
<i>Average per establishment (Thousand baht)</i>	<i>456.1</i>	<i>699.3</i>	<i>53.3</i>
<i>Average per person (Thousand baht)</i>	<i>107.1</i>	<i>149.6</i>	<i>39.7</i>

In terms of employment, number of employees and average number of employees per establishment increased about 42.2 and 37.5 percent respectively and the annual remuneration during 5 year increased by 48.6 percent.

For the value of gross output, intermediate consumption and value added of manufacturing establishments during 5 year increased by 31.3, 24.1 and 61.5 percent respectively.

Result operation of establishment in the Northern region during 5 years ago has gradually grown because, the world economy slowed down due to the flood crisis in the Central region causing the entrepreneur relocation of production base to the Northern region, specially manufacture of electronic component, that cause to employment increasing.

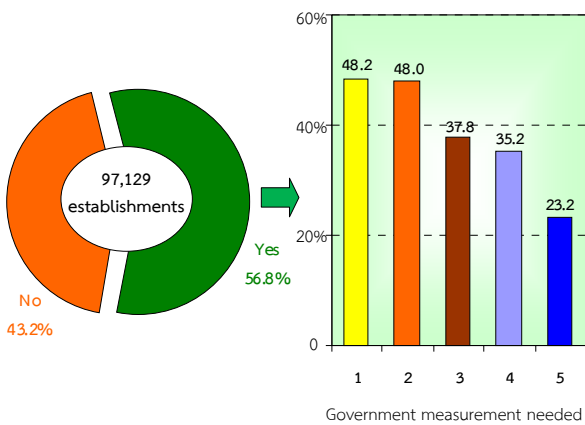
#### Data summary and recommendation

The results of the 2012 Business and Industrial Census show that there were totally 97,129 manufacturing establishments in the Northern region. Most of them were small scale establishments with 1 – 15 person of about 97.6 percent. The highlight industry was *manufacture of wood and product of wood and cork (except furniture); manufacture of articles of straw and plaiting materials* (about 23.3 percent). There were totally 454,134 persons and out of these, about 320,616 persons were employees. They received the annual remuneration, of about 77,887 baht per person. The manufacturing establishments contributed value of gross output, intermediate consumption and value added of about 284,064.0, 216,139.8 and 67,924.2 million baht respectively.

● **Governments measurement needed**

For the manufacturing establishments in the Northern region had no government measurement needed (about 43.2 percent), the rest of about 56.8 percent did. The government measurement needed the top 5 series i.e. reduce production cost (about 48.2 percent), investment promotion to operators (about 48.0 percent), expand the market for busy purchase (about 37.8 percent), find out the low interest of loan (about 35.2 percent), provide training and skills employee development (about 23.2 percent) respectively.

**Figure M Percentage of manufacturing establishment by government measurement needed the top 5 series**



**Note:** The establishment can be done by more than 1

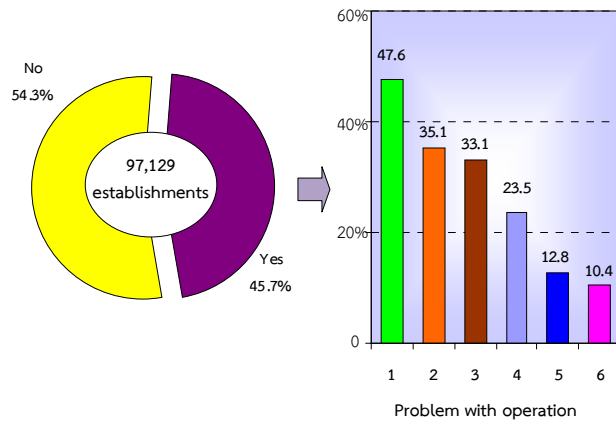
**Government measurement needed:**

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

● **Problem with operation**

The establishment, about 45.7 percent reported had problem with operation. Most of them about 47.6 percent inadequate capital problems. The following were product market, raw material shortages used in the production and labor shortage were about 35.1, 33.1 and 23.5 percent respectively. While the uncertainty of government trade policy was about 12.8 percent.

**Figure N Percentage of manufacturing establishment 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