

## 1. Industry scope of census

**(1) Industry scope and classification system:** The industry scope and classification system of this census complied with the "Census Program" approved and proclaimed by Executive Yuan, and followed "Standard Industrial Classification (the 10<sup>th</sup> revision)" proclaimed for enforcement in 2016. All units who operates in the following sectors and in the Municipalities, Counties/Cities in Taiwan Province, and Kinmen and Lianjian counties in Fujian Province are the scope of this census:

- A. Mining and Quarrying**
- B. Manufacturing**
- C. Electricity and Gas Supply**
- D. Water Supply and Remediation Activities**
- E. Construction**
- F. Wholesale and Retail Trade (excluding Retail Sale via Stalls)**
- G. Transportation and Storage**
- H. Accommodation and Food Service Activities (excluding Food and Beverage Service Activities via Stalls)**
- I. Information and Communication**
- J. Financial and Insurance Activities (excluding Trusts, Funds and Similar Financial Entities, Pension Funding)**
- K. Real Estate Activities**
- L. Professional, Scientific and Technical Activities**
- M. Support Service Activities**
- N. Compulsory Social Security**
- O. Education (excluding schools at all levels within the formal education system (excluding preschools))**
- P. Human Health and Social Work Activities (The clinics of Human Health Services exclude the part of medical services without clinics; Social Work Activities include seniors, disabled and children care agencies only)**
- Q. Arts, Entertainment and Recreation (excluding Artistic Creation, Library and Archives Activities and Other Sports Activities)**
- R. Other service Activities (excluding Activities of Membership Organizations, Activities of Households as Employers of Domestic Personnel)**

The 18 sectors listed above cover subsectors, industry groups and industries as follows: Mining and Quarrying Sector covers 2 subsectors, 2 industry groups and 2 industries. Manufacturing Sector covers 27 subsectors, 84 industry groups and 192 industries. Electricity

and Gas Supply Sector covers 1 subsector, 3 industry groups and 3 industries. Water Supply and Remediation Activities Sector covers 4 subsectors, 6 industry groups and 8 industries. Construction Sector covers 3 subsectors, 9 industry groups and 11 industries. Wholesale and Retail Trade Sector covers 2 subsectors, 26 industry groups and 89 industries. Transportation and Storage Sector covers 6 subsectors, 18 industry groups and 25 industries. Accommodation and Food Service Activities Sector covers 2 subsectors, 5 industry groups and 5 industries. Publishing, audio and video production, Information and communication services Sector covers 6 subsectors, 10 industry groups and 21 industries. Financial and Insurance Sector covers 3 subsectors, 11 industry groups and 24 industries. Real Estate Activities Sector covers 2 subsectors, 3 industry groups and 6 industries. Professional, Scientific and Technical Activities Sector covers 8 subsectors, 14 industry groups and 23 industries. Support Service Activities Sector covers 6 subsectors, 12 industry groups and 20 industries. Compulsory Social Security Sector covers 1 subsector, 1 industry group and 1 industry. Education Sector covers 1 subsector, 3 industry groups and 8 industries. Human Health and Social Work Activities Sector covers 3 subsectors, 5 industry groups and 9 industries. Arts, Entertainment and Recreation Sector covers 4 subsectors, 6 industry groups and 12 industries. Other Service Activities Sector covers 2 subsectors, 7 industry groups and 12 industries.

(2) **The procedure of industrial classification:** "Industry" refers to the categories of economic activities, including all activities for manufacturing various tangible commodities and providing various services. Every establishment was classified the industry code (four-digit code) by economic activities in this census according to Standard Industrial Classification, in order to assist the data processing operation of census and prepare various statistics. The principles to determine industrial classification are as follows:

- A. The greatest and primary economic activity for the added value of the establishment as the determined basis of industrial classification.
- B. If the data of added-value is not available, then adopts the most of total year-round revenues, the number of person engaged or equipment of the product or services as the basis of determination.

(3) **The determination of industrial classification:** The determination is carried out according to the above mentioned principles of industrial classification; to the industry dealing with multiple kinds of individual economical activities, then the determination is carried out adopting the procedure of "top-down", determining the Sector sharing the most proportion in top level and then determining level by level down to industry.

**A. Sector determination:** Determination is according to primary product or labor service types.

**B. Industry classification:** Manufacturing is classified according to product types or the category (material) of used raw materials, materials/supplies; wholesale and retail trade are classified according to the category of commodities to be sold and purchased; and the industrial code (four-digit code) of service business is classified according to the service items provided.

**(4) Explanation on sector classification:** (The explanation of Subsector, Industry Group and Industry, please refer to Standard Industrial Classification)

**A. Mining and Quarrying:**

The industry which is engaged in exploring, taking of such mines and stones as crude petroleum, natural gas, sand, stone and clay, and initial treatment (for instance beating, washing etc. treatment operation) as well as preparation operation (for instance the mining engineering of soil eradication, tunnel opening and digging).

**B. Manufacturing:**

The industry using physical or chemical method transfer materials or substances, components into new product, no matter using power machinery or manpower, in plant or at home is attributed to manufacturing. In addition, substantial transformation of the product, renovation, re-work, the fabrication of assembly, maintenance and installation of industrial machinery and equipment are also deemed as manufacturing; As for parts and components specially used for machinery and equipment, with the manufacturing of the body of its machinery and equipment are attributed to the same category. The components not for specially used, as the manufacturing of prime mover, piston, motor, accessories of electric appliances, active valve, gear and bearing is attributed to proper manufacturing category according to accessories themselves.

**C. Electricity and Gas Supply:**

The industry engaged in electric power, gas fuels and steam supply.

**D. Water Supply and Remediation Activities:**

The industry which is engaged in water supply, waste water (swage) treatment, cleaning, transportation and treatment of wastes, as well as pollution rectification; in addition, classification of recycled goods and reproduction hereof into raw materials are also attributed to this Section.

**E. Construction:**

The industry which is engaged in the construction, reconstruction and repair of building and civil engineering as well as special construction; the lease of construction equipment with operator is also attributed to this Section.

**F. Wholesale and Retail Trade:**

The industry which is engaged in wholesale, retail, brokerage and agency of tangible commodities; sale of commodities with simple treatment which will not change the nature of commodities, for instance, package, purge, classification mix, transportation, installation, repair and so on, are also attributed to this Section.

**G. Transportation and Storage:**

The industry which is engaged in providing passenger and goods transportation and its transport assistance by transport implements, warehouse management, postal administration and courier. Transportation equipment lease with driver belongs to this Section.

**H. Accommodation and Food Service Activities:**

The industry engaged in short-term or temporary lodging service and restaurant service.

**I. Information and communication:**

The industry engaged in the activities of Publishing, Motion Picture, Video and Television Programme Production, Post-Production, Distribution, and Motion Picture Projection, Sound Recording and Music Publishing, Broadcasting and Programming, Telecommunications, Computer programming, consultancy and related activities, and Information service etc.

**J. Financial and Insurance Activities:**

The industry engaged in the activities of Financial Service, Insurance, Security, Commodity Contracts, and Activities Auxiliary to Financial Service Activities, etc.

**K. Real Estate Activities:**

The industry engaged in development, operation and related services of real estate.

**L. Professional, Scientific and Technical Activities:**

The industry which is engaged in professional, scientific and technical service, eg, lawful and accounting, business management consultant, architecture and work service, technology inspection and analysis, R&D, advertisement and market search, professional design and veterinarian service etc.

**M. Support Service Activities:**

The industry which is engaged in supporting enterprise's or organizational operation (a few part of supporting family), eg, lease, manpower agency and supply, travelling and related service hereof, security and detective, building and greening service, administrative support service, etc.

**N. Compulsory Social Security:**

Fund use and administrative work of the social security plan provided by government, including national health insurance, labor insurance, civil servants' insurance, military insurance, national pension, the Retirement, Private school staff retired pension resignation, etc.

**O. Education:**

The industry engaged in kindergarten, education services rather than regular education system, and educational support services industries.

**P. Human Health and Social Work Activities:**

The industry engaged in human health and social work services.

**Q. Arts, Entertainment and Recreation:**

The industry engaged in artistic performances, operating museums and similar institutions, gambling and betting activities, sports activities, amusement and recreation activities.

**R. Other Service Activities:**

The industry engaged in the business other than G to R Sections of Industrial Standard Classification, eg, repair and maintenance of personal and home appliances, laundry, barbering, cosmetology (body care), funeral services and related services, etc.

- (5) The differences of nearly 4 industry scope of census:** Gambling and Betting Activities, Tutorial Education, Care Activities for the Elderly, Disabled and Children were added in the census of 2006 comparing to 2001; Museums Activities, Botanical and Zoological Gardens, Operation of Historical Sites, and Education Verification, etc. were added in the census of 2011 comparing to 2006; Research & Development Service, and Preschool after Integrating Kindergartens and Nursery Schools were added in the census of 2016.

**2. Term explanation applied in census**

- (1) Enterprise unit:** A business unit with an establishment or multiple establishments, or an independent operation body engaging in one kind or many kinds of economical activities, making its own operation policy, fund application, with operation accounting and being responsible for loss and profit is deemed as an enterprise unit.
- (2) Establishment unit:** Refers to an individual business establishment engaging in goods production, sales or providing labor services, such as a plant, a shop, a hotel, a restaurant, a business office, a branch and a retail sales division etc., all of which means an establishment unit.

- (3) **Labor dispatch:** Also known as "Staffing Service", refers to enterprises, which engage in labor dispatch and sign labor contracts with enterprises or organizations, which needs manpower. And then the enterprise dispatches its employees to the unit employing manpower and accepting the commend, supervision and job assignment by the same, providing labor and collecting labor expenses or service charge from the unit employing the manpower.
- (4) **Innovation activities:** Refer to applying new technologies (knowledge) or combining a variety of existing technologies to make significant changes in various operating activities.
- A. "Product or service (including service process) innovation":** Refer to significant changes in the products or services that customers can feel (including service items, content, and service processes (eg, transactions, payment methods, etc.)).
- B. "Process or service background operation innovation":** Refer to innovation activities related to the production aspect, in which **Service background operation innovation** refer to using new or significantly improved technologies, methods of operation or new equipment to provide services.
- C. "Marketing, organizational strategy or management innovation":** Refer to innovation activities related to organizational management, such as finance, personnel, marketing, customer relationship management, strategic alliance, organizational decision-making, knowledge management, etc.
- (5) **Operation digitization:** Refer to using computers or network equipment (PC, Notebook, mobile device (tablet, smart phone), computer station, computer host, area network, wireless area network and intranet etc.) to handle operation-related business.
- A. "Assisting internal management operation":** Refers to the computerized procedure of internal management in enterprise, such as the resource planning system for personnel and salary, financial accounting, production, sale and storage of products, as well as supply chain management, digital learning, knowledge management, and customer relation's management systems.
- (A) "Used only for basic operation":** Refer to using computers to assist with routine operation, eg, billing, personnel data logging, order processing, purchasing matters, etc.
- (B) "Used in both basic and management, decision-making operation":** Refer to in addition to the general routine operation, internal data is further analyzed through various information systems to provide applications for managers or decision-making high-level, such as enterprise resource planning (ERP), customer relationship management (CRM), cloud computing or massive data (big data) analysis and other operating systems.

**B. Network providing business information:** Refer to provide external business information, eg, product catalogues, operating overviews, including email delivery, corporate website settings, online advertising, and business information delivery via community website (Facebook, LINE, Instagram), etc.

**C. Mobile payment function providing sales transaction:** Refer to when selling products or services, through QR Code, APP, sensor and other technologies, directly pay or collect the price with mobile devices such as mobile phones. However, the above sales transactions must be conducted at the physical storefront, excluding online sales transactions.

**D. Online sales:** Refer to Selling or ordering products or services over the Internet, including using online trading platforms (such as Yahoo, PChome) or self-built websites (web pages), network systems, etc., selling products or providing customer orders.

**(A) "Multinational sales":** Refer to selling products or services to foreign transaction objects via the Internet.

**(B) "Third party payment":** Refer to between the trading buyer and the seller, a third party establishing an online electronic payment platform to provide payment and collection services for buyers and sellers to ensure the security of the transaction.

**(6) R&D expenditures:** Refers to the capital expenditures for purchase of fixed assets, intangible assets (such as patents) in order to improve production, sales or service technology, and develop new products, and business operation expenditures related to payment for personnel, raw materials and supplies, maintenance, business and travel expenses.

**(7) Employee training:** Refers to the capital expenditures, which are for purchase of fixed assets, intangible assets in order to carry out employee training, and the business operation expenditures related to payment of lecturer fee, place fee, and registration fee for employee training and of personnel and business of training department.

**(8) Marketing:** Refer to the capital expenditures for purchase of fixed assets, intangible assets of marketing department, and of brand acquisition, and business operation expenditures for advertisements, market survey, packing design, social public relation, and personnel and business expenses of marketing department.

**(9) Computer software and database:** Refers to the expenditure related to computer software and database of every department, including purchase cost and lease cost, etc.

**(10) Professional technology transaction amount:** Refers to the amount for sale or purchase of technology by the way of technology cooperation or technology authorization, including the

purchase, sale and authorization of patents, trademarks (including distribution rights), and specialized technical service (not patent), cooperation and transfer by way of contracts signed; not including financial, commercial, administrative, and legal technical assistance; advertising, insurance, transportation services, authorized use of films, audio and video products and materials within the scope of copyright, as well as the transaction amounts for design and software.

**(11) Environmental protection expenditures:** Refer to the investment expenditures for such pollution prevention equipment as recycle and cleaning treatment of waste gas, wastewater, wastes, and noise, vibration as well as toxic chemical substances management. It includes the expenditures for operation, maintenance, supervision, test and inspection (including personnel expenses), outsourcing expenses, and the common handling pollution expenses (such as fixed pollution source air pollution prevention costs, soil and groundwater pollution treatment costs), and the same submitted to the government, and environmental influence appraisal and R&D, etc.

**(12) Own-branding operation:** Refers to the text or images registered as a trademark approved by law, and promoting their products and services in markets to more clearly show the differences of other products or services, but excluding agency brands, brand belonging groups (affiliates), or foreign brands being authorized to use.

**(13) Triangular Trade:** Refers to the situation the commodities, which are to be sold, made abroad or after being purchased from foreign manufacturers, are not transported back to Taiwan, but transported to foreign buyer, or the object designated by buyer, however, excluding the business only engaging in middleman; its sales income and cost shall report the sales income and cost of original order respectively if list account with the commission income.

**(14) Merchandising routes:**

- A. **"Selling on storefront":** Refers to the sales way carried out by the staff in regular commodity display place.
- B. **"TV shopping":** Refers to the mode through the sales platform and service provided by TV shopping station presenting the contents of commodity and accepting order and transaction.
- C. **"Internet":** Refers to the marketing mode presenting the contents of product through Internet, such as corporate website, network platform, and accepting customer's on-line order of commodities.



**D. "Mail ordering":** Refers to the transaction mode carrying out commodities trade through the fax or catalogue sent by post-purchase company.

**E. "Vending machines":** Refers to the sales way by auto machine instead of staff.

**F. "Direct selling":** Namely "Single-level marketing" and "Multiple-level marketing", refers to the sale behavior carried out by sales staff who directly sell products to consumers face to face without fixed sales place; the sales place is always at consumer's or other's home, working site, or other place rather than fixed retail shops.

**G. "Others":** Refers to the sales channels other than abovementioned six types.

**(15) Transnational service transaction:** Refer to except for the import and export of tangible goods, all transactions with foreign companies (institutions) (the occurrence of fees or income is required), eg, construction, transportation, communications, tourism, finance, insurance, technology, audio and video production, management, information, authorization, certification, maintenance or training, etc.

**(16) Personnel working internationally:** Refer to assigning employees of this nationality to travel, training or work abroad, as well as foreign professionals (excluding foreign workers) or employees of foreign companies (institutions) who are on business trips, training or work in local companies.

**(17) Foreign direct investment:** Refer to a company having a single foreign natural person or a foreign legal person shareholder who holds shares of 10% or more.

**(18) Overseas investment allocation:**

**A. Overseas allocation:** Where domestic enterprises establish branch units (such as branches, offices) abroad, or have the ability to control a single enterprise abroad (including the control through reinvestment of subsidiaries), they are within the scope of overseas allocation.

**B. Multinational group:**

**(A) Parent company:** Refer to the company having an overseas allocation and being not controlled by other companies.

**(B) Multinational group:** Refer to the group consisting of the abovesaid parent company and all domestic and foreign companies being controlled by it.

**(C) International division of labor:** For the entire multinational group, the following businesses are based on domestic or foreign:

- a. Operation management of all multinational businesses:** Refer to Group management policy, finance, personnel and other decisions, the administrative management center is mainly domestic or foreign.
- b. Order receiving, marketing, market survey:** Refer to expansion of customers and orders within the group, as well as market survey , marketing strategy is mainly domestic or foreign.
- c. Material, commodity purchase:** Refer to the main purchasing power of raw materials or commodities required for the production of the Group is mainly domestic or foreign.
- d. R&D or professional technology, knowledge consulting:** Refer to the R&D center within the business group, key technologies, and the control of intellectual property is mainly domestic or foreign.
- e. Manufacturing, construction, mining, pollution remediation:** Refer to production of products, construction of housing projects, mining, and pollution remediation business, domestic-based or foreign-based.
- f. Commodity sales or service offering:** Refer to retail channels, merchandise sales base, and service base.

**(19) Persons engaged:** Refers to the on-the-job employees with salary at the end of year (including foreign employees and the students of industrial cooperation), and own-account workers without fixed salary and unpaid family workers (referring to capital owner and dependents engaged without fixed salary who work over 15 hours weekly in December 2016). It excludes the directors, supervisors, and consultants who receive honorarium only, but do not join management operation actually.

**(20) Salary and labor compensation:** Salary includes basic salary, fixed allowance (such as transportation allowance), overtime fee, various bonuses, and employees' compensation etc., as well as the salary paid to the person left at the end of year. Labor compensation includes salary and non-salary compensation; for instance, pension and lodgment, indemnity funds, severance pay, various premiums borne by employers, and other welfare subsidiary funds (such as educational subsidy, marriage and maternity grant). The whole-year-round salary of own-account workers and unpaid family workers include cash and article discounted value withdrawn in the enterprise by capital owner and his/her dependents.

- (21) Annual expenditures:** Total year-round expenditures are calculated as per accrual concept, namely referring to every expense annually paid for operating business by enterprise, including due payable amount, however, excluding prepaid and temporary payment and capital payment in operation. (such as the expenses for purchasing land or machinery equipment, new construction and overhauling machinery.)
- (22) Annual revenues:** They are calculated as per accrual accounting basis, including outstanding receivables, but excluding account collected in advance.
- (23) Assets used in operation:** Refers to the net value of assets actual in operation for business need, including self-owned/self-used assets and leased and borrowed fixed assets, excluding investment property.
- (24) Large enterprise and SMEs:** The classification adopts the number of employees hired as the standard as follows, referring to the "SMEs Recognized Standards" amended by Ministry of Economy in 2015:
- A. Large enterprise:** Refers to Manufacturing, Construction, Mining and Quarrying employing more than 200 persons; the remained industries employing more than 100 persons.
  - B. SMEs:** Non-large enterprises.
- (25) Four main industries in Manufacturing:** Its scope is as follows according to the definition by Ministry of Economy (figures in the brackets referring to the code of industrial subsector in the 10th revision of "Standard Industrial Classification"):
- A. Consumer Goods Industry:** Includes Food Products and Prepared Feeds Products (08), Beverages (09), Tobacco Products (10), Textiles (11), Wearing Apparel and Clothing Accessories (12), Wood/Bamboo Products (14), Other Non-metallic Mineral Products (23), Furniture (32) and Other manufacturing (33).
  - B. Chemical Industry:** Includes Manufacturing of Leather, Fur and Related Products (13), Paper and Paper Products (15), Printing and Reproduction of Recorded Media (16), Manufacturing of Petroleum and Coal Products (17), Chemical Materials, Fertilizers and Nitrogen Compounds, Plastic and Rubber Materials, and Artificial fibre (18), Other Chemical Products (19), Pharmaceuticals and Medicinal Chemical Products (20), Rubber Products (21), Plastic Products (22).
  - C. Metal and Mechanical Industry:** Includes Manufacturing of Basic Metals (24), Fabricated Metal Products (25), Electrical Equipment (28), Machinery and Equipment (29), Motor Vehicles and Parts (30), Other Transport Equipment and Parts (31); Repair and Installation

of Industrial Machinery and Equipment (34).

**D. Information and Electronic Industry:** Includes Manufacturing of Electronic Parts and Components (26), Computers, Electronic and Optical Products (27).

**(26) Knowledge-intensive Services:** Refer to the definition of OECD (2015), including Water Transportation; Air Transport; Publishing, Information and Communication; Financial and Insurance Activities; Prof., Scientific and Technical Activities; Employment Activities; Security and Investigation Activities; Compulsory Social Security; Education; Human Health and Social Work Activities; Arts, Entertainment and Recreation.

**(27) Non-knowledge intensive Services:**

Non-knowledge intensive = whole Service Sector – Knowledge-intensive Services.

### 3. Calculation method for primary statistic items in census

**(1) Total value of production:** Refer to the market value of all final commodities and labor produced by all domestic production organizations or units in some certain time. The way to calculate total value of production for each sector is as follows:

**A. Manufacturing** = Operating revenues – Total value of raw materials and fuels consumed provided to other foreign enterprises (including subsidiaries) used for production or processing + Inventory of products and work-in-process at year-end – Inventory of products and work-in-process at the beginning of the year – Purchase costs of products and work-in-process – Payment to other foreign enterprises (including subsidiaries) for outsourcing processing expenses – Costs of raw materials, supplies, fuels and goods concurrently sold + Other non-operating revenues + Business operation expenditures of R&D. (also applicable to Mining and Quarrying, Electricity and Gas Supply, and Water Supply and Remediation Activities.)

**B. Construction** = Operating revenues – Construction contracting payments + (Cost of constructed engineering and house sold in construction at the end of the year – The amount of construction in progress at the end of the year by percentage of completion method) – (Cost of constructed engineering and house sold in construction at the beginning of the year – The amount of construction in progress at the beginning of the year by percentage of completion method) – Cost of real estate and land sold – Cost of goods and materials sold + Other non-operating revenues + Business operation expenditures of R&D.

**C. Wholesale and Retail Trade** = Operating revenues – Annual amount of goods purchased – The value of inventory at the beginning of the year + The value of inventory at the end of the year + Other non-operating revenues + Business operation expenditures of R&D.

**D. Transportation and Storage** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + Business operation expenditures of R&D.

**E. Accommodation and Food Service Activities** = Operating revenues – Annual amount of goods purchased – The value of inventory at the beginning of the year + The value of inventory at the end of the year + Other non-operating revenues + Business operation expenditures of R&D.

**F. Information and communication** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + Business operation expenditures of R&D.

**G. Financial and Insurance Activities; Compulsory Social Security:**

**(A) Monetary Intermediation** = Operating revenues – Cost of goods concurrently sold – Deposit interest expenditures – Other operating interest expenditures – Loss on Operating investments + Other non-operating revenues – Exchange loss in other operating expenses + Business operation expenditures of R&D.

**(B) Securities, Commodity Contracts** = Operating revenues – Cost of goods concurrently sold – Deposit interest expenditures – Other operating interest expenditures – Loss on Operating investments + Other non-operating revenues + Business operation expenditures of R&D.

**(C) Insurance; Compulsory Social Security** = Operating revenues – Cost of goods concurrently sold – Deposit interest expenditures – Other operating interest expenditures – Insurance indemnity and payments – Withdrawing and depositing reserves for various liabilities – Loss on Operating investments + Other non-operating revenues – Exchange loss in other operating expenses + Business operation expenditures of R&D.

**(D) Financial Service Activities (excluding Monetary Intermediation) and Activities Auxiliary to Financial Service Activities**

= Operating revenues – Cost of goods concurrently sold – Operating interest expenditures – Loss on Operating investments + Other non-operating revenues + Business operation expenditures of R&D.

**H. Real Estate Activities (including Architecture Activities, Engineering Activities and Related Technical Consultancy, Interior Design Activities)**

= Operating revenues – Cost of goods concurrently sold – The construction in progress at the beginning of the year and House for sale + The construction in progress at the end of the year and House for sale – Outsourcing construction cost – Land cost of real estate sold + Other non-operating revenues + business operation expenditures of R&D.

**I. Prof., Scientific and Technical Activities (excluding Architecture Activities, Engineering Activities and Related Technical Consultancy, Interior Design Activities, Scientific Research and Development)**

= Operating Revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**J. Scientific Research and Development** = Utilized value of raw materials, supplies and fuels + Service costs + Labor compensation + Commission expenditures + Tax and duty expenses + Various depreciations + Other operating expenses + (revenues of goods concurrently sold – Cost of goods concurrently sold) + Bad debts and transferred expenditures + Net value of rental expenditures + Net value of interest expenditures.

**K. Support Service Activities** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**L. Education** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**M. Human Health and Social Work Activities** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**N. Arts, Entertainment and Recreation** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**O. Other Service Activities** = Operating revenues – Cost of goods concurrently sold + Other non-operating revenues + business operation expenditures of R&D.

**(2) Intermediate consumption:** The calculation methods of the intermediate consumption in different sectors are as follows:

**A. Manufacturing** = Utilized value of raw materials, supplies and fuels – Utilized value of raw materials, supplies and fuels provided to other foreign enterprises (including subsidiaries) used for production or processing + Outsourcing processing expenses – payment to other foreign enterprises (including subsidiaries) for outsourcing processing expenses + Expenses of utilities + Other operating expenses (also applicable to Mining and Quarrying, Electricity and Gas Supply, Water Supply and Remediation Activities).

**B. Construction** = Utilized value of construction materials + Expenses of utilities + Expenses of fuels for construction machinery and tools + Rental expenses of construction machinery and tools + Other costs of construction sites + Other operating expenses.

- C. Wholesale and Retail Trade** = Utilized value of raw materials, supplies and fuels + Commission expenditures + Other operating expenses.
- D. Transportation and Storage** = Utilized value of fuels + Utilized value of supplies + Expenses of utilities + Rental expenditures of transportation equipment + Expenditures of freight transportation + Repair and maintenance expenses + Commission expenditures + Other operating expenses.
- E. Accommodation and Food Service Activities** = Utilized value of raw materials, supplies and fuels + Commission expenditures + Other operating expenses.
- F. Information and Communication** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- G. Financial and Insurance Activities; Compulsory Social Security:**
- (A) **Monetary Intermediation** = Handling charge expenditures + Commission expenditures + Other operating expenses. (excluding exchange loss.)
- (B) **Financial Service Activities (excluding Monetary Intermediation), Security, Futures Commodity Contracts and Activities Auxiliary to Financial Service Activities** = Handling charge expenditures + Commission expenditures + Other operating expenses.
- (C) **Insurance; Compulsory Social Security** = Reinsurance expenditures + Handling charge expenditures + Commission expenditures + Other operating expenses. (excluding exchange loss.)
- H. Real Estate Activities** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- I. Professional, Scientific and Technical Activities** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- J. Scientific Research and Development** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- K. Support Service Activities** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- L. Education** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- M. Human Health and Social Work Activities** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.
- N. Arts, Entertainment and Recreation** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.

**O. Other Service Activities** = Utilized value of raw materials, supplies and fuels + Service costs + Commission expenditures + Other operating expenses.

**(3) Gross value of production** = Total value of production – Intermediate consumption.

**(4) Net value of production (at market price)** = Gross value of production – Various depreciation.

**(5) Net value of production (at factor cost)**

= Net value of production at market price – Indirect taxes.

= Labor compensation + Enterprise rewards + Net value of rents + Net value of interests.

**(6) Enterprise rewards** = Profits + Bad debts and transferred expenditures + Other non-operating expenditures – Gain from investment and earnings of assets sold – Government grant revenues + business operation expenditures of R&D.

**(Research & Development Service** = Bad debts and transferred expenditures + Revenues of goods concurrently sold – Cost of goods concurrently sold.)

**(7) Profits** = Annual revenues – Annual expenditures.

**(8) Net value of rents** = Rental expenditures – Rental revenues.

**(9) Net value of interests** = Interest expenditures – Interest revenues.

**(10) Owned assets** = Current assets + Net value of fixed assets + Investment Property + Long-term investments + Net value of intangible assets + Other assets.

**(11) Assets used in operation** = Owned assets + Fixed assets in-rented or borrowed – Investment Property.

**(12) Fixed assets used in operation** = Net value of owned assets + Fixed assets in-rented or borrowed.

**(13) Labor facility rate**

A. Assets used in operation per person engaged (NT\$1,000):

$$\frac{\text{Assets used in operation}}{\text{Number of persons engaged}}$$

B. Fixed assets used in operation per person engaged (NT\$1,000):

$$\frac{\text{Fixed assets used in operation}}{\text{Number of persons engaged}}$$

**(14) Labor productivity**

A. Total value of production per person engaged (NT\$1,000):

$$\frac{\text{Total value of production}}{\text{Number of persons engaged}}$$

B. Gross value of production per person engaged (NT\$1,000):

$$\frac{\text{Gross value of production}}{\text{Number of persons engaged}}$$



- C. Operating revenues per persons engaged  
(NT\$1,000):

$$\frac{\text{Operating revenues}}{\text{Number of persons engaged}}$$

**(15) Capital stock productivity**

- A. Total value of production per dollar of  
assets used in operation (NT\$):

$$\frac{\text{Total value of production}}{\text{Assets used in operation}}$$

- B. Gross value of production per dollar of  
assets used in operation (NT\$):

$$\frac{\text{Gross value of production}}{\text{Assets used in operation}}$$

- C. Operating revenues per dollar of assets  
used in operation (NT\$):

$$\frac{\text{Operating revenues}}{\text{Assets used in operation}}$$

- D. Profits per dollar of assets used in  
operation (NT\$):

$$\frac{\text{Profits}}{\text{Assets used in operation}}$$

**(16) Operating efficiency**

- A. Value-added ratio (%):

$$\frac{\text{Gross value of production}}{\text{Total value of production}} \times 100$$

- B. Profit rate (%):

$$\frac{\text{Profits}}{\text{Total revenues}} \times 100$$

- C. Turnover ratio of total assets (%):

$$\frac{\text{Operating revenues}}{\text{Owned assets}} \times 100$$

- D. Turnover ratio of assets used in  
operation (%):

$$\frac{\text{Operating revenues}}{\text{Assets used in operation}} \times 100$$

**(17) Statistical methods for industry specific area—application of Geographic Information**

**System:** It was completed by depicting the geographic boundaries of specific areas (export processing zones, free trade zones, science parks and industrial areas) of each industry based on a Geographic Information System, then positioning the actual business address of the manufacturers, to calculate roughly the manufacturers located within the boundaries of each specific area.