Appendix I Concepts and Definitions

A. Concepts in Brief

1. National Accounts Statistics and System of National Accounts

GDP is the total value of an economy's final output of all goods and services produced over a period of time. The amount of value added generated by production activities will be distributed to various units, and the units will consume goods and services produced by producers. Therefore, GDP can be estimated by production, income, and expenditure approaches. In theory, the three approaches result in equivalent values for GDP, although they are often unequal in practice owing to the data source limitations.

The United Nation implements the System of National Accounts (SNA) providing a set of guidelines for national statistical offices compiling national economic accounts. At present, we adopt the 2008 SNA version, although some treatments, such as the capitalization of expenditures on weapon systems, haven’t been followed.

2. The framework of SNA

The purpose of SNA is to record economic flows and stocks. Economic flows include transactions in goods and services and transactions in financial instruments.

Transactions in goods and services are classified into 19 industries in accordance with the 10th edition of Statistical Classification of Industries, R.O.C. While transactions in financial instruments include 5 institutional sectors such as corporate and quasi-corporate enterprises of non-financial corporations, financial corporations, general government units, private non-profit institutions serving households (NPISHs), and households and unincorporated enterprises. The statistical classification of economic stocks is the same as transactions in financial instruments.

3. The statistical scope of national accounts

The statistical scope of national accounts usually covers the whole country. However, it can also only cover a region. The accounting period is usually one year or one quarter.

The national accounts statistics provide the value of economic activities measured in monetary terms. The economic activities include production, consumption, investment, exports and imports, as well as income and saving etc.

B. Production

1. Domestic Production

Domestic Production represents the value of all goods and services produced by institutional units (households, enterprises, non-profit units, etc.) within a country (or an economic territory), regardless of these institutions being operated by nationals or foreigners. In an open economy, corporations or branches invested or set up by foreigners are common. In the case, although the production itself is included in the coverage of Domestic Production, the factor income is not attributed to residents. Therefore, GNI is equal to Domestic Production less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units.

The economic territory of a country covers the area (including airspace) within the political boundary, and ships, aircraft and other transportation equipment owned by domestic enterprises in foreign territories.

Residents of a country refer to persons, companies, government agencies, and non-profit organizations having centre of predominant economic interest in the country (engage or intent to continue engaging in economic activities and transactions on a significant scale for one year or more). Institutions of extraterritoriality are regarded as territorial enclaves located in other countries signing political agreements with the host country. Therefore, staffs of embassies, consulates and military abroad should be regarded as domestic residents. On the other hand, nationals whose main economic interests located abroad are not domestic residents.

2. Gross Output

Gross Output is the value of goods and services calculated at the producers' price. For example, a textile mill produces 1,000 units of fabrics every year, and sold by 3,000 dollars per unit. Therefore, an annual Gross Output of the textile mill is 3 million dollars.

3. Gross Domestic Product and Net Domestic Product

Gross Output measures the value of goods and services rather than the value created by production activities, which Gross Domestic Product (GDP) measured. In the previous example, suppose the textile mill bought 2 million dollars of cotton yarns to produce fabrics worth 3 million dollars. The textile mill's contribution would be only 1 million dollars. Thus, yarns worth 2 million dollars are called Intermediate Consumption. From yarns to fabrics, 1 million dollars is the value of production, Gross Domestic Product, created by the textile mill, which is same as the Gross Value Added. Gross Domestic Product subtracts the consumption of fixed assets (or depreciation) in the production process is called Net Domestic Product.

C. Incomes

1. National Income and National Disposable Income

The government imposes various taxes on production and imports, which constitutes a part of market prices. Without taxes on production and imports, national income will be identical no matter valued at factor cost (including wages, land rents, interests, profits, etc.) or at market prices. While usually, the national income at market prices is equal to the national income at factor cost plus the taxes on production and imports. The formula is as follows:

	Compensation of employees
Plus	: Operating surplus
Equal	: Domestic factor income
Plus	: Net factor income from the rest of the world
Equal	: National income at factor cost
Plus	: Net taxes on production and imports
Equal	: National income at market prices

Generally, national income refers to net national income (NNI) at market prices. While with additional footnotes, it can also refer to NNI at factor costs (income). Those income which is not generated by production activities, such as asset revaluation and donations from abroad, should not be included in national income.

National income at market prices plus net current transfers from the rest of the world equals national disposable income. Current transfers from the rest of the world are not generated by domestic productions, but can be dominated and utilized by residents, hence are included in national disposable income.

2. Factor income from the rest of the world

Net factor income from the rest of the world is equal to the total primary incomes receivable (including compensation of employees and property incomes) by residents from non-residents minus the total primary incomes payable by residents to non-residents.

D. Final Consumption Expenditure

1. Private Final Consumption Expenditure

Private final consumption expenditure includes the expenses on goods and services incurred by households and NPISHs. There are two classifications of private final consumption expenditure, one is by purpose or function, and the other is by type of goods and services. The former contains, according to COICOP (the Classification of Individual Consumption according to Purpose), 12 divisions such as food and non-alcoholic beverages, alcoholic beverages and tobacco, clothing and footwear, housing water electricity gas and other fuels, furnishings household equipment and routine household maintenance, health, transport, communication, recreation and culture, education, restaurants and hotels, miscellaneous goods and services, as well as final consumption expenditure of NPISHs. The latter covers 4 breakdowns such as durable goods, semi-durable goods, non-durable goods and services.

2. Government Final Consumption Expenditure

The general government consists of units of central or local governments, non-market NPIs, that are controlled by government units, such as nonprofit funds, foundations, non-departmental public bodies, as well as social security funds. General government units operate as both producers and final consumers. The value of the non-market output produced by government is estimated as the sum of costs of production including intermediate consumption, compensation of employees, net taxes on production and imports and imputed consumption of fixed capital.

Final consumption expenditure of government is equal to the output of general government less the value of goods and services sold to households and other producers (sales revenue) and the value of own-account gross fixed capital formation, plus the value of goods and services purchased from market producers for provision to households free or at economically insignificant prices (social benefits and assistance in kind purchased from market producers), and the purchase of the output of the Central Bank (estimated by the sum of the costs incurred in production).

To express the relationships by equations is as follows：

- Gross Output produced by government = Intermediate Consumption + Compensation of Employees + Net Taxes on Production and Imports + imputed Consumption of Fixed Capital
- Government Final Consumption = Gross Output produced by government – Sales revenue – own-account Gross Fixed Capital Formation + social benefits and assistance in kind purchased from market producers + the output of the Central Bank

3. National Consumption Expenditure

National consumption expenditure is defined as the total amount of final consumption of residents (including individuals and institutions), which is equal to private final consumption expenditures plus government final consumption expenditures.

4. Private and Government Actual Final Consumption Expenditure

In the 1993 SNA, government final consumption expenditure is divided into provisions for community as a whole, as well as for individual households, according to the beneficiaries. The former, called collective consumption expenditure, is defined as government actual final consumption. And the latter, called individual consumption expenditure, together with private final consumption expenditure, constitutes private actual final consumption.

E. Saving

National saving is derived from disposable income less national consumption expenditure, which can be classified into 4 sectors: general government, non-financial corporate and quasi-corporate enterprises, financial institutions, as well as households and NPISHs.

F. Capital Formation

1. Gross Capital Formation

Gross capital formation refers to products domestic producers acquire and not treat as intermediate consumption but as the increase of inventories or fixed assets during a specific period. The main distinction between intermediate consumption and gross capital formation depends on whether the goods and services involved are completely used up in the accounting period or not.

The coverage of gross capital formation is inconsistent with tangible assets in business accounting. For example, non-produced assets in business accounting, such as land, mineral, uncultivated forests and crop, are not regarded as gross capital formation in SNA.

2. Gross Fixed Capital Formation

Gross fixed capital formation (GFCF) is measured by the value of acquisitions less disposals of products which can be repeatedly or continuously used in production processes by producers over one year. Thus, GFCF includes:

(1) The durable goods for production and intellectual property with durability more than one year. (However, land, mineral, non-cultivated forest and other similar natural resource are excluded.)

(2) The expenditure of improvements on durable goods for extending their lives and enhancing their productive performance.

(3) The expenditure on the land clearance and improvements as well as the development and formation of forest, mineral, orchard and cultivated plant.

(4) The live stock or trees which can be used repeatedly over one year to produce products, such as breeding stocks, draught animals, dairy cattle and the like.

(5) The commission and other costs of ownership transfer on the above-mentioned produced assets and non-produced ones such as land, mineral, and forest, etc.

GFCF can be divided into 8 types listed below: residential buildings, non-residential buildings, other construction except land improvements, land improvements and plantation and orchard development, transport equipment, machinery and equipment, breeding stock, draught animals, dairy cattle and the like, and intellectual property products.

3. Net Fixed Capital Formation

Consumption of fixed capital is the decline during the course of the accounting period, in the current value of the stock of fixed assets owned and used by a producer as a result of physical deterioration, normal obsolescence or normal accidental damage. Gross fixed capital formation less consumption of fixed capital is equal to net fixed capital formation.

4. Changes in Inventories

Inventories are stocks of outputs and purchased goods not used as fixed assets at a specific time and do not include commodities stored by households, government, and non-profit institutions. The change in inventories is equal to the difference between the level of inventories at the start and end of the period.

G. Government Current Receipts and Disbursements

Government current receipts and disbursements include imputed items such as imputed residential rent of all government units. The total amounts are net values obtained by deducting the inter-government transfers from the sums of all government units.

Government current receipts are divided into several categories, like property and entrepreneurial income (such as interest or dividends), revenue from taxes, and current transfers from residents and non-residents (such as fees or fines), etc. Government current disbursements are also divided into several categories, which include government final consumption expenditure, property expenses (such as government bond interest payments), subsidies, and current transfers to residents and non-residents (such as family allowances in cash or overseas assistance). The difference of current receipts and disbursements is the saving of government.

H. External Transactions

1. Imports and Exports of Goods and Services

(1) Goods

Imports and Exports of goods refer to merchandise transactions between residents and non-residents involving ownership transfers. It is compiled mainly according to customs data, combined with adjustment for classification, valuation, timing, coverage and ownership transfers.

According to the 6th Balance of Payments and International Investment Position Manual (BPM6), imports and exports should be recorded on a strict change of ownership basis. That is, flows of goods between the country owning the goods and the country providing the processing services should not be recorded as imports and exports of goods. Instead, the fee paid to the processing unit should be recorded as the import of processing services by the country owning the goods and an export of processing services by the country providing them.

Merchanting is defined as the purchase of goods by a resident (of the compiling economy) from a non-resident combined with the subsequent resale of the same goods to another non-resident without the goods being present in the compiling economy.

The goods of merchanting are recorded as negative exports on acquisition and positive exports on disposal. The difference between sales over purchases of goods for merchanting is shown as the item “net exports of goods under merchanting.”

(2) Services: Imports and exports services refer to various service transactions between residents and non-residents.

(i) Transport

Transport services cover passenger transport, freight services, postal and courier services, etc.

(ii) Insurance Services Charges

Insurance services cover the provision of various types of insurance including freight insurance, direct insurance and reinsurance.

(iii) Maintenance and repair services

Maintenance and repair services cover repairs and maintenance on ships, aircraft, and other transport equipment. Cleaning of transport equipment, maintenance and repairs of computers and construction are excluded. Cleaning of transport equipment is included in transport services. Construction maintenance and repairs are included under construction. Maintenance and repairs of computers are included under computer services.

(iv) Charges of Travel

Travel services cover expenditures on goods and services while traveling abroad for less than one year.

(v) Charges of Financial Services

Financial services cover financial intermediary and auxiliary services. Financial services may be charged for by explicit charges or margins between interest payable and the reference rate on loans and deposits (called financial intermediation service charges indirectly measured, abbreviated as FISIM).

(vi) Other Services

Other Services cover manufacturing services on physical inputs owned by others, construction services, telecommunications, computer, and information services, charges for the use of intellectual property, personal, cultural, and recreational services, government goods and services n.i.e., etc.

2. Factor Income

Factor income from and to the rest of the world includes primary incomes receivable from as well as payable to non-residents, as described in para. C.2.

3. Current Transfers

Current transfers from and to the rest of the world refer to transactions between residents and non-residents in which real resources or financial items are provided without any counterpart. Examples include workers' remittances (resourced from compensation of foreign workers staying in the compiling economy for one year or longer), donations, remittances to support family, gifts and samples, insurance claims, etc.