



Arab Republic of Egypt

Central Agency for Public Mobilization and Statistics

**Supply and Use tables
2017/2018
Within the Framework of
National Accounts System**

Issue. Nove, 2020

Reference No. 71-22401/2020

Preface

The Central Agency for Public Mobilization and Statistics is pleased to present Supply and Use tables for year 2017/2018 in accordance with the methodologies and definitions recommended by the System of National Accounts 1993 and its modification for year 2008 (SNA 1993, 2008), where it depends in its compiling on Economic Census 2017/2018 and detailed results of different statistics conducted by CAPMAS in addition to statistics and data from external sources, these tables have been compiled for all institutional sectors which are recommended by the system of national accounts.

For the desire to provide a macro-economic data valid to analyze and evaluate the performance of the Egyptian national economy, CAPMAS present these tables to support the purposes of macroeconomic analysis, rationalize the process of economic policy-making, and take the necessary decisions to address the economic tracks.

CAPMAS will be glad to receive suggestions and comments from those interested in economic and financial studies, which contribute in developing the work and improve the quality of data in the future.

General/ Khairat Mohamed Barakat
President of Central Agency for
Public Mobilization and Statistics

Methodology

The Concept of Supply and Use Tables

Supply and use tables Represent a full framework of resources and uses within the framework of national accounts system 2008, the supply table presents the sources of production in the national economy (local or imported). While the use table presents the way that these resources of products used, also other primary income generated from the production process, where the value of GDP can be derived from it.

The Importance of Supply and Use Tables

- 1- The supply and use matrix representing a systematic framework for preparing the national accounts estimates according to the three estimate approaches (expenditures, production, income), with the assumption of the balance between the uses and resources.
- 2- Due to the adoption of these tables on many detailed data of the production and use of goods and services produced in the community, they are considered the basis framework to re-evaluate the data. And for the continued estimates operations of the non-covered statistical sources, in addition it reflects the coverage, deficiencies and Insufficiency of statistical, and the consistency among different statistics.
- 3- The supply and use matrix can be used as a basis of the quarterly estimates which rely on quick and short-term statistics.
- 4- The supply and use matrix can be used as the basic starting point of compiling the input and output tables, and Therefore extract the coefficient matrix.
- 5- It helps in the derivation of weights for compiling the price indices.

The Structure of Supply and Use Tables

These tables Display the supply and use of Goods and services classified by activities that produced or consumed these goods and services, where activates classified by international standards industrial classification of all economic activities (**ISIC 4**), and classification of Function of Government (**COFOG**) with its major sectors which are:

- 1- Non-financial corporations sector.
- 2- Financial corporations sector.
- 3- General government sector.
- 4- Non-profit institution serving households sector
- 5- Household sector

As the industries or activities in both the first and second sector based on the production of goods and services for the purpose of sale in the market, and therefore it have a market price or an equivalent price in the market (also includes output for own final use). While for the third and fourth sectors it represented the services producers of government and non-profit institution that serving households. As These services have no market price or an equivalent market price. The last sector illustrates the paid services that Offers among households.

The supply table Shows both of the value of various products produced in each industry valued by basic Prices (basic price does not include transportation and trade margins, and net taxes on products), as well as the total supply of each product valued by both basic prices and Purchasers prices (the price paid by the buyer, i.e. after the addition of margins and net taxes on production and products), And for the use table it displays both the cost of production in every industry (the uses of each product valued by purchasing price).

It is assumed that the supply of each product must equivalent to the uses of this product when each of them measured by the same price and also the value of each product for any Industry must be equal to its Production cost Including the primary inputs.

The Balance Between the Value-added and Final Demand in the Use Table

The supply and use tables have a great benefit not only for its possibility to derive the symmetric input-output tables which are used for analytical purposes, but also for the possibility of compiling the value added by industry (activity) and final demand by product type and by sector. As well as these tables verify the link between the value -added and the final demand, on the basis that the aggregate GDP must be equal to final demand. In this context, the integration achieved between the three approaches of measuring GDP: production, income and expenditure approach, as follows:

1- Production Approach

We get the GDP by subtracting intermediate consumption from production of all producers in the economy plus any taxes, and minus any subsidies, on products.

GDP = Total Output at basic prices

- intermediate consumption at purchasers' prices
- + taxes on products
- subsidies on products

2- Income Approach

GDP is measured as the sum of the components of value added generated by producers or industries, and is calculated as follows:

GDP = Total compensation of employees

- + taxes on production
- subsidies on production
- + mixed income
- + gross operating surplus

- + taxes on products
- subsidies on products

3- Expenditure Approach

GDP can be measured by expenditure approach as this approach calculates GDP by adding together the components of final demand.

GDP = Household consumption expenditure

- + final consumption expenditure of non-profit institution serving households
- + final consumption expenditure of government
- + Gross fixed capital formation
- + Changes in inventories
- + exports of goods and services
- imports of goods and services

Definitions and Concepts:

Supply and use tables have been compiled according to the United Nations System of National Accounts for the year 1993, and the most important definitions used in the framework of this system are as follows:

- 1- **The Residence:** the residence of each institutional unit is the economic territory with which it has the strongest connection, in other words, its centre of predominant economic interest. The concept of economic territory in the SNA coincides with that of the BPM6. Some key features are as follows. In its broadest sense, an economic territory can be any geographic area or jurisdiction for which statistics are required. The connection of entities to a particular economic territory is determined from aspects such as physical presence and being subject to the jurisdiction of the government of the territory. The most commonly used concept of economic territory is the area under the effective economic control of a single government. However economic territory may be larger or smaller than this, as in a currency or economic union or a part of a country or the world.
- 2- **Non-Financial Corporations:** are corporations whose principal activity is the production of market goods or non-financial services.
- 3- **Financial Corporations:** consist of all resident corporations that are principally engaged in providing financial services, including insurance and pension funding services, to other institutional units.
- 4- **General Government:** the general government sector consists of the totality of institutional units which, in addition to fulfilling their political responsibilities and their role of economic regulation, produce principally non-market services (possibly goods) for individual or collective consumption and redistribute income and wealth.

- 5- **Non-Profit Institutions Serving Households (NPISHs):** consist of non market NPIs that are not controlled by government. They provide goods and services to households free or at prices that are not economically significant. Most of these goods and services represent individual consumption but it is possible for NPISHs to provide collective services.
- 6- **Household:** is a group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. As well as individual households, there are units described as institutional households that comprise groups of persons staying in hospitals, retirement homes, convents, prisons, etc. for long periods of time.
- 7- **The Rest of the World:** consists of all non-resident institutional units that enter into transactions with resident units, or have other economic links with resident units. It is not a sector for which complete sets of accounts have to be compiled, although it is often convenient to describe the rest of the world as if it were a sector. The accounts, or tables, for the rest of the world are confined to those that record transactions between residents and non-residents or other economic relationships, such as claims by residents on non-residents and vice versa. The rest of the world includes certain institutional units that may be physically located within the geographic boundary of a country; for example, foreign enclaves such as embassies, consulates or military bases, and also international organizations.
- 8- **Market Output:** consists of output intended for sale at economically significant prices.
- 9- **Market Producers:** are establishments, all or most of whose output is market production.
- 10- **Non-Market Producers:** consist of establishments owned by government units or NPISHs that supply goods or services free, or at prices that are not economically significant, to households or the community as a whole.
- 11- **Market Prices:** market prices for transactions are the amounts of money willing buyers pay to acquire something from willing sellers.
- 12- **Market Price Equivalents:** market price equivalents are proxies, or substitute measures, for market prices in those cases for which no actual market prices have been set; a customary approach is to construct such prices by analogy with known market prices established under conditions that are considered essentially the same.
- 13- **The Purchaser's Price:** is the amount paid by the purchaser, excluding any VAT or similar tax deductible by the purchaser, in order to take delivery of a unit of a good or service at the time and place required by the purchaser. The purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

- 14- The Basic Price:** is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.
- 15- Transport Margin:** a transport margin consists of those transport charges paid separately by the purchaser in taking delivery of the goods at the required time and place.
- 16- Trade Margin:** is defined as the difference between the actual or imputed price realized on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed.
- 17- Taxes on Production:** taxes on production consist of taxes payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers; they also include other taxes on production, which consist mainly of taxes on the ownership or use of land, buildings or other assets used in production or on the labour employed, or compensation of employees paid.
- 18- Taxes on Products:** is a tax that is payable per unit of some good or service. The tax may be a specific amount of money per unit of quantity of a good or service (the quantity units being measured either in terms of discrete units or continuous physical variables such as volume, weight, strength, distance, time, etc.), or it may be calculated ad valorem as a specified percentage of the price per unit or value of the goods or services transacted. A tax on a product usually becomes payable when it is produced, sold or imported, but it may also become payable in other circumstances, such as when a good is exported, leased, transferred, delivered, or used for own consumption or own capital formation. An enterprise may or may not itemize the amount of a tax on a product separately on the invoice or bill that it charges its customers.
- 19- Customs and Duties on Imports:** consist of taxes on goods and services that become payable at the moment when those goods cross the national or customs frontiers of the economic territory or when those services are delivered by non-resident producers to resident institutional units.
- 20- Subsidies:** are current unrequited payments that government units, including non-resident government units, make to enterprises on the basis of the levels of their production activities or the quantities or values of the goods or services that they produce, sell or import. They are receivable by resident producers or importers. In the case of resident producers they may be designed to influence their levels of production, the prices at which their outputs are sold or the remuneration of the institutional units engaged in production.

- 21- Intermediate Consumption:** consists of the value of the goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital.
- 22- Value-added By Basic Prices:** The value of output by basic prices less the value of intermediate consumption by purchasers prices.
- 23- Gross Domestic Product:** is the sum of the gross values added of all resident producers at basic prices, plus all taxes less subsidies on products.
- 24- Depreciation:** 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.
- 25- Compensation of Employees:** is defined as the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period. Taxes less subsidies on production consist of taxes payable or subsidies receivable on goods or services produced as outputs and other taxes or subsidies on production, such as those payable on the labor, machinery, buildings or other assets used in production.
- 26- Gross Operating Surplus:** gross operating surplus is the value-added by basic prices less the compensation of employees.
- 27- Net Operating Surplus:** net operating surplus is the value of gross operating surplus less the value of depreciation (the consumption of fixed capital).
- 28- Final Consumption Expenditure of Household:** consists of the expenditure, including expenditure whose value must be estimated indirectly, incurred by resident households on individual consumption goods and services, including those sold at prices that are not economically significant and including consumption goods and services acquired abroad.
- 29- Final Consumption Expenditure of General Government:** consists of expenditure, including expenditure whose value must be estimated indirectly, incurred by general government on both individual consumption goods and services and collective consumption services.

30-Final Consumption Expenditure of NPISHs: consists of the expenditure, including expenditure whose value must be estimated indirectly, incurred by resident NPISHs on individual consumption goods and services and possibly on collective consumption services.

31- Fixed Capital Formation: fixed capital formation is the certain additions to the value of fixed assets during the accounting period.

32- Changes in Inventories: are measured by the value of the entries into inventories less the value of withdrawals and less the value of any recurrent losses of goods held in inventories during the accounting period.

33- RAS Method: is a mathematical method used to conduct the balance between supply and use tables.

Reference period:

Year 2017/2018 for public and public business sector while year 2017 for the private sector.

Data Sources:

- The compilation of supply and use tables depends mainly on the economic census data that has been conducted by CAPMAS for the year 2017/2018 and bulletin of economic authorities. As well as the results of some surveys where CAPMAS conducted it like: income and expenditure survey, and labor force survey. In addition to some data that published by other relevant authorities where the most important of them are:
- The final statement of general government.
- Balance of payments that issued by central bank.
- bulletin (issued by ministry of agriculture).
- Balance sheet of central bank

Classifications:

- 1- Classification of Function of Government (COFOG)
- 2- Central Product Classification (CPC)
- 3- International Standard Industrial Classification (ISIC4)
- 4- Classification of Individual Consumption According To Purpose (COICOP)
- 5- Harmonized Commodity Description and Coding System (HS)
- 6- Transactions Classification, SNA 1993, 2008
- 7- Transactors Classification, SNA 1993, 2008
- 8- Balance of payments manual (Sixth Edition)

The applied classifications have been transferred to ISIC4 for all activities and to CPC1.1 for products.

The Most Important Adjustments:

1- Petroleum Refining Activity: it represents special importance within the manufacturing industries. With regard to subsidies on petroleum products, it depends on data from the Ministry of petroleum, the industrial bulletins of CAPMAS, and the final statement of general government, in addition to data from the Ministry of Planning, where the production was calculated at basic price, and the intermediate consumption at purchaser price like the production inputs in the other activities. This treatment shows implicit subsidy on petroleum products paid by the government.

2- Banking Production: banks offer two types of services as follow:

- a. Financial intermediary service indirectly measured (FISIM): It is estimated by the difference between interest earned on loans giving by banks and interest paid to depositors, and the discount rate between banks (the inter-bank rate), the FISIM estimated as follows:

$$\text{FISIM} = (\text{Total value of loans multiplied by the interest rate on loans minus the total value of loans multiplied by the inter-bank discount rate}) + (\text{Total value of deposits multiplied by the discount rate between banks minus the total value of deposits multiplied by the interest rate on deposits}).$$

This way is more accurate than that relying on the difference between interests earned and interests paid. The financial services that estimated indirectly have been distributed among the sector and economic activities passed on the types of loans and deposits by activities.

- b. The actual production of banks, it includes revenue from commissions, profits and losses on the sale of foreign currency and other banking services.

3- Insurance Companies Production: estimated production is calculated for the insurance companies as the recommended equation in SNA 2008:

$$\begin{aligned} \text{The estimated production} &= \text{collected premiums} \\ &\quad - \text{paid Compensation} \\ &\quad - \text{changes in reserves} \end{aligned}$$

While for The actual production it calculated as follow:

$$\begin{aligned} \text{The actual production} &= \text{Reinsurance commissions} \\ &\quad + \text{other earnings} \\ &\quad + \text{rentals} \end{aligned}$$

- 4- **Government Accounts:** the government production is calculated in a different way from the production of the rest of other sectors, where the government produces services that serve the general purpose and are not intended to profit. Consequently, the value of government production will not be the value of the revenues received by the government, but will be the value of what is being spent on the production expenses on public services (Expenditure approach). This expenses are represented in the employees compensation, and the purchase of goods and services, in addition to taxes and fees paid by government unit, And also the value of depreciation (the government accounts do not include depreciation estimate, so it estimates in national accounts as a percentage of value added to the governmental sector).
- 5- **Health Insurance Authority treated as a health activity but not insurance activity.**
- 6- **Actual and imputed rents for housing:** the estimates of the value of actual and imputed rentals for households depended mainly on the data of income and expenditure survey and economic census data for the year 2017/2018.
- 7- **Transportation and Trade Margins:** total margin is calculated as the value of total production of transporting goods for all transportation activity (land - Railway - water - air). The trade margin for products were calculated as the establishment total sales for its account for both retail and wholesale trade in the private, public and the public business sector minus the purchases of goods for sale purpose.

As a result of that, the margins of transport and trade were distributed on products in a special column for each of them in supply table to get the value of these products at purchaser price, while putting these margins with a negative value in front of the row of trade and transport products in order to achieve a balance between supply and use of transport and trade services at purchases price.

8- Exports and Imports:

- a. Exports and imports goods: it depends on the foreign trade database issued by CAPMAS according to (HS) classification, and it has been converted in accordance with the Central Product Classification (CPC), by linking between the two classifications.
- b. Exports and imports services: it depends on the data of balance of payments prepared by the Central Bank of Egypt, and was placed in a special column for exports and imports services separately from exports and imports goods.
- c. Direct purchases abroad by residents: It estimated through the travel item in the balance of payments, where it considered imports as they reflect the value of what the residents spent abroad. Taking into account that these purchases treated as imports and as household final consumption expenditure so its value included in imports column in the supply table and in household consumption in the use table in front of the row related to them.

- d. Purchases on the domestic territory by non-residents: It estimated through the travel item in the balance of payments which is considered exports, as they reflect the value of what the non-residents spent inside Egypt. Therefore, these purchases have been deducted from the household spending and added it to the exports in the same table in front of the related row, and then the total value of the row is equal to zero. As these purchases appears with a negative value in household expenditure column and with a positive value in exports column.
- e. Imports of goods, services, adjustment and purchases of residents abroad, appear in the supply table.
- f. Exports of goods and services and purchases of non-residents on the domestic territory by non-residents appear in the use table.

9- Matrix of taxes and custom duties on imports: the estimation of taxes and tariffs depend on the final statement of general government issued by the Ministry of Finance, as it represented in taxes on goods and services, international trade taxes, and business taxes. These taxes were divided in into two column in the supply table:

- a. Taxes on production: It is the total taxes of goods and services and business taxes, as it has been distributed in accordance with the existing products in the supply table through the details contained in the final statement of general government. Such as taxes on sales, stamps and fees which are difficult to link with the products classification, and also because the repetition of item "others" in the final statement of general government. So it was relying on the data of financial and economic indicators bulletin issued by CAPMAS in the distribution of sales tax, which comes total in the final statement of general government, as advantage was taken from the structure distribution of taxes and fees commodity item according to the economic activity at 2nd level, and that is for manufacturing industries only.
- b. Custom duties on imports: it is the value of international trade taxes, except taxes on exports, and these fees has been distributed according to the relative structure of commodity imports. When it did not have any details.
- c. Sales taxes on imported goods: it is the value of sales taxes on imported goods; the distribution of taxes on imported goods is obtained from foreign trade statistics based on customs data.
- d. Sales taxes on domestic goods: it is the value of sales taxes on domestic goods.
- e. Other taxes on products: it is the gross taxes on goods and services, and commercial taxes, and they do not include customs taxes and sales taxes on imported and domestic goods. They have been distributed according to products of supply tables through the details existing in the final statement of general government.

- 10- Subsidies Matrix on products:** the estimation of subsidies dependence on final statement of general government according to the economic classification, which includes " the Supply Commodities" and distributed according to bread and the sold goods under the ration cards, in addition the implicit subsidy of petroleum products have been distributed in accordance with the different petroleum products.
- 11- Final Consumption Expenditure of Households:** this final expenditure was calculated based on income and expenditure survey 2017/2018, where a link between the Central Product Classification (CPC) and Classification of Individual Consumption According To Purpose (COICOP) has been done, beside that taking into account the nature of each product in terms of use as intermediate or final consumption, or capital formation where the final expenditure for certain products were estimated as a residual in use table. As a result there is a big difference between household consumption in the use table and income and expenditure survey.
- 12- Final Consumption Expenditure of General Government:** it was calculated by indirect way, through the cost of production minus the value of marketed and non-marketed sales of goods and services.
- 13- Capital Formation:** capital formation was distributed by product type and according to each activity.
- 14- Change In Inventories:** change in inventory calculated at the level of activity, public, public business and private sector from CAPMAS bulletin, the change in inventory of fuel distributed according to petroleum products, the distribution of the change in the inventory of spare parts and equipment products on equipment, the distribution of the change in the inventory of primary material according to the structure of the manufacturing industries requirements, and thus was prepared the change matrix according to inventory by product and activity.
- 15- Adjustment of Prices From Basic To Purchaser Prices:** as noted earlier, the supply table is converted from basic prices to the purchaser prices by adding transportation and trade margins, net taxes and custom duties and subsidies on products, and thus we get the total supply at purchasers price for consistency with the use table which prepared by purchasers prices.
- 16- Estimation of Non-Observed Sector:** economic census data covers the data of all economic activities (inside enterprises), however; it does not cover the activities outside enterprises. Therefore we depend on the data of labor force survey to estimate the production of different activities occurred outside enterprises as the production is estimated using the number of workers, outside enterprises, multiplied by estimated averages of productivity from the economic census for small enterprises. Additionally, wages rates and other economic data rates were estimated from economic census data taking into account the paid and unpaid workers, and it has been used to estimate wages and other variables to outside enterprises.

In addition, the income and expenditure survey has been used for deriving the production of some services using total household spending on these services, also the estimation of local production of some product has been relying on the balance between the two sides of supply and use.

17- The differences have been settled using RAS technique as a mathematical method which is used to balance supply and use tables.

The Main Problems:

- 1- The difficulty of classification of taxes and subsidies according to product that imposed by taxes or subsidies
- 2- Many difficulties in the reclassification of transport and trade margins by type product.
- 3- Inconsistency between the data due to relying on different sources for both sides of supply and use.
- 4- Difficulty of estimating non-covered activities statistically or which has lacked comprehensive and accuracy data sources.

The Availability of the SUT:

The tables are available in hardcopy, softcopy and electronically on CAPMAS website

General indicators

Aggregate indicators

- 1- The total GDP for the year 2017/2018 at current prices reached 4331.9 billion L.E, where the total production by basic price for the same year reached 6765.8 billion L.E, while the total intermediate consumption by purchaser prices reached 2577 billion L.E.
 - 2- The total wages (workers compensation) reached **661.8** billion L.E and the total of depreciation reached 215.3 billion L.E while the total net operating surplus reached 3481.9 billion L.E.
 - 3- The household final consumption expenditure reached 3521.9 billion L.E, and the final consumption expenditure of non-profit institution serving households reached 42.3 billion L.E, where the government final consumption expenditure reached 365.9 billion L.E.
 - 4- The total capital formation reached 1047.3 billion L.E, where the total exports reached 964.1 billion L.E and the total imports reached 1488.2 billion L.E.
 - 5- The total sales taxes on imported products reached 83.9 billion L.E, and the total sales taxes on domestic products reached 58.9 billion L.E, and the other taxes on products reached 173.8 billion L.E, while the total tariffs reached 37.9 and the total value of subsidies reached **211.4** billion L.E.
- **Contribution of organizational Sectors of VA:**
- 1- The total value added for the year 2017/2018 (by basic prices) 4188 billion L.E.
 - 2- The value added (by basic prices) for the non-financial corporation reached 3682.7 billion L.E, which represents 87.92% from the total of VA.
 - 3- The value added (by basic prices) for the general government sector reached 319.1 billion L.E, which represents 7.62% from the total of VA.
 - 4- The value added (by basic prices) for the financial corporation reached 162.2 billion L.E, which represents 3.87% from the total of VA.
 - 5- The value added (by basic prices) for non-profit institution serving households sector reached **21.9** billion L.E, which represents 0.52% from the total of VA.
 - 6- The value added (by basic prices) for the activities of the household sector reached **2.9** billion L.E, which represents of 0.07% from the total of VA.

- Contribution of the most important economic activities of VA:
 - 1- The value added (by basic prices) for manufacturing industries activities reached 599.1 billion L.E, which represents 14.3% from the total of VA.
 - 2- The value added (by basic prices) for wholesale, retail trade and repair of motor vehicles and motorcycles activities reached 581.9 billion L.E, which represents 13.89% from the total of VA.
 - 3- The value added (by basic prices) for agriculture, forestry and fishing activities reached 452.5 billion L.E, which represents 10.8% from the total of VA.
 - 4- The value added (by basic prices) for mining and quarrying activities reached 435.9 billion L.E, which represents 10.41% from the total of VA.
 - 5- The value added (by basic prices) for transport and storage activities reached 381.9 billion L.E, which represents 9.12% from the total of VA.
 - 6- The value added (by basic prices) for construction activities reached 244.7 billion L.E, which represents 5.84% from the total of VA.