

# Glossary

**accounting period.** The period to which estimates of GDP refer, usually a calendar year or a quarter. For ICP comparisons of GDP, the accounting period is a calendar year.

**actual individual consumption.** The total value of the individual consumption expenditures of households, of nonprofit institutions serving households, and of government. It is a measure of the individual goods and services that households actually consume as opposed to what they actually purchase.

**additive.** A method that, for each economy being compared, provides real expenditures for aggregates that are equal to the sum of the real expenditures of their constituent basic headings. An additive aggregation method provides real expenditures that satisfy the average test for volumes but are subject to the Gerschenkron effect.

**aggregation.** The process of weighting and averaging basic-heading PPPs to obtain PPPs for each level of aggregation up to GDP.

**analytical categories.** GDP, main aggregates, expenditure categories, expenditure groups, and expenditure classes for which the results of a comparison are published. This categorization is not necessarily the same as those of the hierarchical classification used for PPP calculations.

**base country invariance.** The property whereby the relativities between the PPPs, price level indexes, and volume indexes of economies are not affected by either the choice of local currency as numéraire or the choice of reference economy.

**base economy.** The economy, or group of economies, for which the value of the PPP is set

at 1.00 and the value of the price level index and of the volume index is set at 100.

**basic heading.** The lowest aggregation level in the ICP expenditure classification. In theory, a basic heading is defined as a group of similar well-defined goods or services. In practice, it is defined by the lowest level of final expenditure for which explicit expenditure weights can be estimated. Thus an actual basic heading can cover a broader range of items than is theoretically desirable and include both goods and services. It is at the level of the basic heading that expenditures are defined and estimated, items are selected for pricing, prices are collected and validated, and PPPs are first calculated and averaged.

**basic price.** The amount received by the producer from the purchaser for a unit of good or service produced as output. It includes subsidies on products and other taxes on production. It excludes taxes on products, other subsidies on production, the supplier's retail and wholesale margins, and separately invoiced transport and insurance charges Basic prices are the prices most relevant for decision making by suppliers (producers).

**bilateral or binary comparison.** A price or volume comparison between two economies that draws on data only for those two economies.

**bilateral or binary PPP.** A PPP between two economies calculated using only the prices and weights for those two economies.

**changes in inventories.** The acquisition less disposals of stocks of raw materials, semifinished goods, and finished goods that are held by producer units prior to being processed further

or sold or otherwise used. Semifinished goods cover work in progress (partially completed products whose production process will be continued by the same producer in a subsequent accounting period), including the natural growth of agricultural crops prior to harvest and the natural growth in livestock raised for slaughter. Inventories also cover all raw materials and goods stored by government as strategic reserves.

**characteristics.** The technical parameters and price-determining properties of an item listed in an item specification.

**Classification of the Functions of Government (COFOG).** Classification of transactions by government, including outlays on final consumption expenditure, intermediate consumption, gross fixed capital formation, and capital and current transfers, by function or purpose. A major use of COFOG is to identify which final consumption expenditures of government benefit households individually and which benefit households collectively.

**Classification of Individual Consumption According to Purpose (COICOP).** Classification of the individual consumption expenditures of three institutional sectors— households, nonprofit institutions serving households, and government—by the ends that they wish to achieve through these expenditures. Individual consumption expenditures are those that are made for the benefit of individual households. All final consumption expenditures by households and NPISHs are defined as individual, but only the final consumption expenditures by government on individual services are treated as individual.

**collective consumption expenditure by government.** The final consumption expenditure of government on collective services. It is a measure of the services that government provides to the community as a whole and that households consume collectively.

**collective services.** Services provided by government that benefit the community as a

whole: general public services, defense, public order and safety, economic affairs, environmental protection, and housing and community amenities. They also include the overall policy-making, planning, budgetary, and coordinating responsibilities of government ministries overseeing individual services and government research and development for individual services. These activities cannot be identified with specific individual households and are considered to benefit households collectively.

**comparability.** The requirement that economies price items that are identical or, if not identical, equivalent. Items are said to be comparable if they have identical or equivalent technical parameters and price-determining properties. Equivalent means that they meet the same needs with equal efficiency so that purchasers are indifferent between them and are not prepared to pay more for one than for the other. The pricing of comparable items ensures that the differences in prices between economies for an item reflect actual price differences and are not affected by differences in quality. If differences in quality are not avoided or corrected, they can be mistaken for apparent price differences, leading to an underestimation or overestimation of price levels and an overestimation or underestimation of volume levels.

**comparison-resistant.** A term first used to describe nonmarket services that are difficult to compare across economies because they have no economically significant prices with which to value outputs, their units of output cannot be otherwise defined and measured, the institutional arrangements for their provision and the conditions of payment differ from economy to economy, and their quality varies between economies but the differences cannot be identified and quantified. The term is used, for example, to describe construction and the rental of housing, whose complexity, variation, and economy specificity can make it difficult to price them comparably across economies.

**compensation of employees.** All payments in cash

and in kind made by employers to employees in return for work carried out during the accounting period. These payments comprise gross wages and salaries in cash and in kind, employers' actual social contributions, and imputed social contributions.

**component.** A subset of goods or services or both that make up some defined aggregate.

**consumption expenditure by government.** The actual and imputed final consumption expenditure incurred by government on individual goods and services and collective services. It is the total value of the individual consumption expenditure and collective consumption expenditure by government.

**consumption of fixed capital.** The reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence, or normal accidental damage.

**country aggregation with redistribution (CAR) procedure.** A means of obtaining aggregate global volumes and PPPs for economies within each region that retain the relativities established between the economies in the regional comparison. In other words, each region's results for the aggregate remain fixed when linked with the results of other regions. The procedure is as follows. The global basic-heading PPPs for all economies in the comparison are aggregated to the level of the aggregate. The global PPPs for the aggregate are used to calculate global real expenditures for each economy, with which the total global real expenditure on the aggregate for each region can be determined. The total global real expenditure of each region is redistributed across the economies in the region in line with the distribution of real expenditures in the regional comparison. Global PPPs for economies are calculated indirectly with the redistributed global real expenditure.

**country product dummy (CPD) method.** The multilateral method used to obtain transitive PPPs

at the basic-heading level through regression analysis. It treats the calculation of PPPs as a matter of statistical inference—that is, an estimation problem rather than an index number problem. The underlying hypothesis is that, apart from random disturbance, the PPPs for individual items within a basic heading are all constant between any given pair of economies. In other words, it is assumed that the pattern of the relative prices of different items within a given basic heading is the same in all economies. It is also assumed that each economy has its own overall price level for the basic heading and that this overall price level fixes the levels of absolute prices of the items in the basic heading for the economy. By treating the prices observed in the economies for the basic heading as random samples, the PPPs between each pair of economies and the common pattern of relative prices can be estimated using classical least square methods. The method allows the estimation of sampling errors for the PPPs.

**country product dummy-weighted (CPD-W) method.** A variant of the CPD method in which important items receive a higher weight in the calculation than less important items. The choice of weights is arbitrary, as it is in the Gini-Éltető-Köves-Szulc\* (GEKS\*) method. However, the weight of 1 for an important item and 0 for a less important item used in the GEKS\* method cannot be used in a weighted CPD because assigning a weight of 0 to the prices of less important items will remove them from the calculation. In ICP 2011 and ICP 2017, important items were given a weight of 3 and less important items a weight of 1.

**deflation.** The division of the current value of an aggregate by a price index—the deflator—in order to value its volumes at the prices of the price reference period.

**economically significant price.** A price that has a significant influence on the amounts that producers are willing to supply and the amounts that purchasers wish to buy. This is the basic price for producers and the purchase price for purchasers.

**economic territory.** The geographic territory of an economy plus any territorial enclaves in the rest of the world. By convention, it includes embassies, military bases, and ships and aircraft abroad. The economic territory does not include extraterritorial enclaves—that is, the parts of the economy’s own geographic territory used by government agencies of other economies or by international organizations under international treaties or agreements between states.

**editing.** The first step of validation, which entails scrutinizing data for errors. It is the process of checking survey prices for nonsampling errors by identifying those prices that have extreme values—that is, prices whose value is determined to be either too high or too low vis-à-vis the average according to certain criteria. The price may score a value for a given test that exceeds a predetermined critical value, or its value may fall outside some prespecified range of acceptable values. Both are standard ways of detecting errors in survey data, and both are employed by the ICP. Prices with extreme values are not necessarily wrong. But the fact that their values are considered extreme suggests that they could be wrong. They are possible errors, and as such they need to be investigated to establish whether they are actual errors.

**employers’ actual social contributions.** Payments actually made by employers to social security funds, insurance enterprises, or autonomous pension funds for the benefit of their employees.

**error.** The difference between the observed value of a PPP or volume index and its correct value. Errors may be random or systematic. Random errors are generally called errors; systematic errors are called biases.

**expenditure weight.** The share of nominal expenditure of a basic heading in GDP.

**final consumption expenditure.** The expenditure on goods and services consumed by individual households or the community to satisfy their individual or collective needs or wants.

**financial intermediation services indirectly measured (FISIM).** An indirect measure of the value of the financial intermediation services that financial institutions provide clients but for which they do not charge explicitly.

**Fisher-type PPP.** The PPP for an aggregate between two economies that is defined as the geometric mean of the Laspeyres-type PPP and the Paasche-type PPP for the aggregate.

**fixity.** The convention whereby the relativities between a group of economies that were established in a comparison covering just that group of economies remain unchanged, or fixed, when the economies of the group are included in comparisons with a wider group of economies. For example, the price and volume relativities of the ICP regions and Eurostat–OECD remain unchanged in the global comparison. If fixity were not observed, there would be two sets of relativities for the participating economies that would not necessarily be in agreement because the relativities and ranking of economies can change as the composition of the group of economies being compared changes. Fixity ensures that participating economies have only one set of results to explain to users.

**Gerschenkron effect.** An effect applicable only to aggregation methods that use either a reference price structure, whereby each economy’s quantities are valued by a uniform set of prices to obtain volumes, or a reference volume structure, whereby each economy’s prices are used to value a uniform set of quantities to obtain PPPs. For methods employing a reference price structure, an economy’s share of total GDP—that is, the total for the group of economies being compared—will rise as the reference price structure becomes less characteristic of its own price structure. For methods employing a reference volume structure, an economy’s share of total GDP will fall as the reference volume structure becomes less characteristic of its own volume structure. The Gerschenkron effect arises because of the negative correlation between prices and volumes.

**Gini-Éltet -Köves-Szulc (GEKS) method.** A method used to calculate PPPs for basic headings or to aggregate basic-heading PPPs to obtain PPPs for each level of aggregation up to GDP. There are two versions of the GEKS at the basic-heading level: one that takes account of the importance of the items priced and one that does not. The version that takes the importance of items into account is referred to as GEKS\* in the literature. Strictly speaking, the GEKS is a procedure whereby any set of intransitive binary index numbers are made transitive and multilateral while respecting characteristicity (the property in which the resulting multilateral indexes differ as little as possible from the original binary indexes). The procedure is independent of the method used to calculate the intransitive binary indexes. But as used in the current literature, GEKS covers both the way in which the intransitive binary PPPs are calculated and the procedure used to make them transitive and multilateral. The intransitive binary PPPs for a basic heading or an aggregate are obtained by calculating first a matrix of Laspeyres-type PPPs and a matrix of Paasche-type PPPs and then taking the geometric mean of the two, a matrix of Fisher-type PPPs. The Fisher-type PPPs are made transitive and multilateral by applying the GEKS procedure, which involves replacing the Fisher-type PPP between each pair of economies by the geometric mean of itself squared and all the corresponding indirect Fisher-type PPPs between the pair obtained using the other economies as bridges. The resulting GEKS PPPs provide real expenditures that are not subject to the Gerschenkron effect and are not additive. GEKS results are considered better suited to comparisons across economies of the price and volume levels of individual basic headings or aggregates. See Laspeyres-type PPP and Paasche-type PPP (their formulation depends on whether they are being used to calculate basic-heading PPPs or to aggregate basic-heading PPPs).

**global core item.** An item priced for the specific purpose of providing a link or overlap between regional comparisons at the basic heading

level in order to combine them in a single world comparison. For ICP 2017, lists of global core items were compiled for consumer goods and services, government services, and capital goods by the Global Office in consultation with the regions, participating economies, and subject matter experts. Regions selected items from the global core item lists and added them to their regional item lists in line with each item's availability and importance in their region. The global core items priced by the regions were included in the regional comparisons as well as the world comparison.

**goods.** Physical objects for which a demand exists, over which ownership rights can be established, and whose ownership can be transferred from one institutional unit to another by engaging in transactions on the market. They are in demand because they may be used to satisfy the needs or wants of households or the community or used to produce other goods or services.

**government.** General government, which is the institutional sector that consists of federal, central, regional, state, and local government units together with the social security funds imposed and controlled by those units. It includes nonprofit institutions engaged in nonmarket production that are controlled and financed mainly by government units or social security funds.

**gross capital formation.** The total value of gross fixed capital formation, changes in inventories, and acquisitions less disposals of valuables.

**gross domestic product (GDP).** When estimated from the expenditure side, the total value of the final consumption expenditures of households, nonprofit institutions serving households, and government plus gross capital formation plus the balance of exports and imports.

**gross fixed capital formation.** The total value of acquisitions less disposals of fixed assets by resident institutional units during the accounting period, plus the additions to the value of

nonproduced assets realized by the productive activity of resident institutional units.

**gross operating surplus.** The surplus or deficit accruing from production before taking into account (1) consumption of fixed capital by the enterprise; (2) any interest, rent, or similar charges payable on financial or tangible nonproduced assets borrowed or rented by the enterprise; or (3) any interest, rent, or similar charges receivable on financial or tangible nonproduced assets owned by the enterprise.

**gross wages and salaries.** The wages and salaries in cash and in kind paid by enterprises to employees before the deduction of taxes and social contributions payable by employees.

**household.** A small 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 food and housing. A household can consist of only one person.

**importance.** A concept that is defined in terms of a specific economy within a basic heading. An item is either important or less important in the economy for the given basic heading. An important item is one that accounts for a significant share of the expenditure on the basic heading in the economy in question. Weighted PPP estimation methods use importance as an indication of weight.

**imputed rent.** The imputations that have to be made when owners occupy a dwelling to produce housing services for themselves. In effect, owner-occupiers are renting the dwelling to themselves, and the value of the rent has to be imputed. The imputed rent should be valued at the estimated rent a tenant pays for a dwelling of the same size and quality in a comparable location with similar neighborhood amenities. When markets for rented accommodations are virtually nonexistent or unrepresentative, the value of the imputed rent has to be derived by some other objective procedure, such as the user cost method.

**imputed social contributions.** The imputations that have to be made when employers provide social benefits directly to their employees, former employees, or dependents out of their own resources without involving an insurance enterprise or autonomous pension fund and without creating a special fund or segregated reserve for the purpose.

**indirect binary comparison.** A price or volume comparison between two economies made through a third economy. For example, for economies A, B, and C, the PPP between A and C is obtained by dividing the PPP between A and B by the PPP between C and B, so that  $PPPA/C = PPPA/B / PPPC/B$ .

**individual consumption expenditure by government.** The actual and imputed final consumption expenditure incurred by government on individual goods and services.

**individual consumption expenditure by households.** The actual and imputed final consumption expenditure incurred by resident households on individual goods and services. Includes expenditures on individual goods and services sold at prices that are not economically significant. By definition, all final consumption expenditures of households are for the benefit of individual households and are individual.

**individual consumption expenditure by nonprofit institutions serving households (NPISHs).** The actual and imputed final consumption expenditure incurred by NPISHs on individual goods and services. Because most final consumption expenditures of NPISHs are individual, all final consumption expenditures of NPISHs are treated by convention as individual.

**individual good or service.** A consumption good or service acquired by a household and used to satisfy the needs and wants of members of that household.

**individual services.** A term used to describe the services (and goods) provided to individual

households by nonprofit institutions serving households and government. Such services include housing, health care, recreation and culture, education, and social protection. They do not include the overall policy-making, planning, budgetary, and coordinating responsibilities of the government ministries overseeing individual services. Nor do they include government research and development for individual services. These activities are considered to benefit households collectively and are therefore classified under collective services.

**input price approach.** The approach used to obtain PPPs for nonmarket services. Because there are no economically significant prices with which to value the outputs of these services, national accountants follow the convention of estimating the expenditures on nonmarket services by summing the costs of the inputs required to produce them. PPPs for nonmarket services are calculated using input prices because these prices are consistent with the prices underlying the estimated expenditures. In practice, prices are only collected for labor, which is by far the largest and most important input.

**institutional sector.** The five sectors identified by the System of National Accounts: nonfinancial corporations, financial corporations, government, households, and nonprofit institutions serving households.

**intercountry validation.** The validation that takes place after participating economies have completed their intracountry validation and submitted their survey prices to the regional coordinator. It is an iterative process consisting of several rounds of questions and answers between the regional coordinator and participating economies. It involves editing and verifying the average survey prices reported by participating economies for a basic heading and assessing the reliability of the PPPs they produce for the basic heading. The objective is to establish that the average survey prices are for comparable items, that the items have been priced accurately, and that the allocation of important indicators

is correct. In other words, it seeks to ascertain whether economies have interpreted the item specifications in the same way and whether their price collectors have priced them without error. The Quaranta and Dikhanov editing procedures are employed for this purpose. Both procedures entail detecting outliers among the average survey prices by identifying outliers among the corresponding price ratios. Economies verify the outliers found in order to ascertain whether they are valid observations. If they are not, the economy either corrects or suppresses them.

**intermediate consumption.** The value of the goods and services, other than fixed assets, that are used or consumed as inputs by a process of production.

**intracountry validation.** The validation that precedes intercountry validation. It is undertaken by participating economies prior to submitting their survey prices to the regional coordinator. Each economy edits and verifies its own prices without reference to the price data of other economies. Validation is carried out at the item level. The objective is to establish that price collectors within the economy have priced items that match the item specifications and that the prices they have reported are accurate. This entails an economy searching for outliers first among the individual prices that have been collected for each item it has chosen to survey and then among the average prices for these items. Subsequently, the economy verifies the outliers found in order to ascertain whether they are valid observations. If they are not, the economy either corrects or suppresses them.

**item.** A good or service that is the result of production. Items are exchanged and used for various purposes—as inputs in the production of other goods and services, for final consumption, or for investment.

**item list.** The common list of well-defined goods and services from which economies participating in a comparison make a selection of items to price for the purpose of compiling PPPs.

**item specification.** A list of the physical and economic characteristics that can be used to identify an item selected for pricing, thereby ensuring that economies price comparable items. An item specification can be either brand and model specific (that is, a specification in which a particular brand and model is stipulated) or generic (that is, a specification in which only the relevant price-determining and technical characteristics are given and no brand is designated).

**Jevons index.** An elementary price index that is defined as the unweighted geometric average of the current to base period price relatives.

**Laspeyres-type PPP.** A PPP for an aggregate between two economies, economy B and economy A, where the reference economy is economy A and the weights are those of economy A. The PPP is defined as the weighted arithmetic average of the PPPs between economy B and economy A for the basic headings covered by the aggregate. The expenditure shares of economy A are used as weights.

**market price.** The amount of money a willing buyer pays to acquire a good or service from a willing seller—that is, the actual price for a transaction agreed to by the transactors. It is the net price inclusive of all discounts, surcharges, and rebates applied to the transaction. Also called the transaction price.

**multilateral comparison.** A price or volume comparison of more than two economies simultaneously that is made with price and expenditure data from all economies covered and that produces consistent relations among all pairs of participating economies—that is, one that satisfies the transitivity requirement, among other requirements.

**national annual average price.** A price that has been averaged both over all localities of an economy in order to take into account the regional variations in prices and over the whole of the reference year in order to allow for seasonal

variations in prices as well as general inflation and changes in price structures.

**net taxes on production.** Taxes less subsidies on production.

**nominal expenditure.** An expenditure that is valued at national price levels. It can be expressed in local currencies or in a common currency to which it has been converted with market exchange rates. It reflects both volume and price differences between economies.

**nonmarket service.** A service that is provided to households free or at a price that is not economically significant by nonprofit institutions serving households or by government.

**nonprofit institution serving households (NPISHs).** A nonprofit institution that is not predominantly financed and controlled by government, that provides goods or services to households free or at prices that are not economically significant, and whose main resources are voluntary contributions by households.

**numéraire currency.** The currency unit selected to be the common currency in which PPPs and real and nominal expenditures are expressed.

**observation.** An individual price, or one of a number of individual prices, collected for an item at an outlet.

**outlet.** A shop, market, service establishment, Internet site, mail order service, or other place from where goods or services can be purchased and from where the purchasers' or list prices of the items sold can be obtained.

**outlier.** A term generally used to describe any extreme value in a set of survey data. Extreme values are not necessarily wrong, but the fact that they are considered extreme suggests that they could be wrong. They are possible errors, and as such they need to be investigated to establish whether they are actual errors.

**Paasche-type PPP.** A PPP for an aggregate between two economies, economy B and economy A, where the reference economy is economy A and the weights are those of economy B. The PPP is defined as the weighted harmonic average of the PPPs between economy B and economy A for the basic headings covered by the aggregate. The expenditure shares of economy B are used as weights.

**Penn effect.** The overstatement of the economic size of high-income economies with high price levels and the understatement of the economic size of low-income economies with low price levels that result when market exchange rate–converted GDP is used to establish the relative sizes of economies. It arises because market exchange rates do not take into account price level differences between economies when used to convert their GDP to a common currency.

**price approach.** The approach whereby the price comparison between two or more economies is made by comparing the prices for a representative sample of comparable items. PPPs are generally derived using the price approach.

**price level index (PLI).** The ratio of PPP to an market exchange rate. PLIs provide a measure of the differences in price levels between economies by indicating for a given aggregation level the number of units of the common currency needed to buy the same volume of the aggregation level in each economy. At the level of GDP, they provide a measure of the differences in the general price levels of economies.

**price measure.** PPPs and the price level indexes to which they give rise.

**price relative.** The ratio of the price of an individual item in one economy to the price of the same item in some other economy. It shows how many units of currency A must be spent in economy A to obtain the same quantity and quality—that is, the same volume—of the item that X units of currency B purchase in economy B.

**product error.** An error that occurs when price collectors price items that do not match the item specification and neglect to report having done so. They may not have been aware of the mismatch, such as when the item specification is too loose, or they may have priced a substitute item as required by the pricing guidelines but failed to mention that they had done so on the price reporting form.

**productivity adjustment.** An adjustment made to the prices paid by nonmarket producers for labor, capital, and intermediate inputs so that they correspond to a common level of multifactor productivity. In practice, it is an adjustment made to the prices (compensation of employees) paid by nonmarket producers for labor so that they represent the same level of labor productivity.

**purchaser's price.** The amount paid 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. It excludes any value added tax (or similar deductible tax on products) that purchasers can deduct from their own VAT liability with respect to the VAT invoiced to their customers. It includes suppliers' retail and wholesale margins, separately invoiced transport and insurance charges, and any VAT (or similar deductible tax on products) that purchasers cannot deduct from their own VAT liability. For equipment goods, it also includes the installation costs, if applicable. The purchaser's price is the price most relevant for decision making by buyers.

**purchasing power parity (PPP).** Spatial price deflators and currency converters that eliminate the effects of the differences in price levels between economies, thereby allowing volume comparisons of GDP and its components.

**quantity approach.** The approach whereby a volume comparison between two or more economies is made by comparing the volumes of a representative sample of comparable items. Volume comparisons are usually made not directly but indirectly, by dividing the expenditure

ratios between economies by their corresponding price ratios.

**real expenditure.** An expenditure that has been converted to a common currency and valued at a uniform price level with PPPs. It reflects only volume differences between economies.

**reference PPP.** The PPP used for a basic heading for which no prices are collected and no PPP is calculated. It is based on prices collected for other basic headings and serves as a proxy for the missing PPP.

**reference quantity.** The quantity to which the prices collected for an item must be rebased to ensure that they refer to the same quantity being compared.

**reference year.** The calendar year to which the results of the comparison refer.

**resident population.** The number of people present in the economic territory at a given point in time.

**services.** Outputs that are produced to order and that cannot be traded separately from their production. Ownership rights cannot be established over services, and by the time their production is completed, they must have been provided to consumers. An exception to this rule is a group of industries, generally classified as service industries, some of whose outputs have the characteristics of goods. These industries are those concerned with the provision, storage, communication, and dissemination of information, advice, and entertainment in the broadest sense of those terms. The products of these industries, where ownership rights can be established, may be classified as either goods or services, depending on the medium by which these outputs are supplied.

**social transfers in kind.** Individual goods and services provided as transfers in kind to individual households by government units (including social security funds) and nonprofit institutions

serving households. The goods and services can be purchased on the market or produced as nonmarket output by government units or nonprofit institutions serving households.

**subsidies on production.** Subsidies on goods and services produced as outputs by resident enterprises that become payable as a result of the production of these goods or services (that is, subsidies payable per unit of good or service produced) as well as subsidies that resident enterprises may receive as a consequence of engaging in production (for example, subsidies to reduce pollution or to increase employment). The former are called subsidies on products; the latter are called other subsidies on production.

**System of National Accounts (SNA).** The internationally agreed-on standard set of recommendations on how to compile measures of economic activity. The SNA describes a coherent, consistent, and integrated set of macroeconomic accounts in the context of a set of internationally agreed-on concepts, definitions, classifications, and accounting rules.

**taxes on production.** Taxes on the goods and services produced as outputs by resident enterprises that become payable as a result of the production of these goods or services (that is, taxes payable per unit of good or service produced, such as excise duties and a nondeductible value added tax) as well as taxes that resident enterprises may pay as a consequence of engaging in production (for example, payroll taxes and taxes on motor vehicles). The former are called taxes on products; the latter are called other taxes on production.

**transitivity.** The property whereby the direct PPP between any two economies yields the same result as an indirect comparison via any other economy. For example, for economies A, B, and C, the ratio of the PPP between A and B and the PPP between C and B is equal to the PPP between A and C, so that  $PPP_{A/C} = PPP_{A/B} / PPP_{C/B}$ .

**user cost method.** The method of estimating the value of imputed rentals for owner-occupiers by summing the relevant cost items: intermediate consumption (current maintenance and repairs, insurance), consumption of fixed capital, other taxes on production, and net operating surplus (nominal rate of return on the capital invested in the dwelling and land).

**value added tax (VAT).** A tax on products collected in stages by enterprises. This wideranging tax is usually designed to cover most or all goods and services. Producers are obliged to pay the government only the difference between the VAT on their sales and the VAT on their purchases for intermediate consumption or capital formation. The VAT is not usually levied on exports.

**verification.** The second step of validation, which entails investigating the possible errors detected during the editing of survey prices to establish

whether they are actual errors and, if they are actual errors, correcting or suppressing them. In many cases, verification will require revisiting the outlets where the prices were collected to determine whether what was priced matches the item description and whether the correct price and quantity were recorded. Price observations found to be incorrect should be either eliminated or replaced by the correct observation.

**volume index.** A weighted average of the relative levels in the quantities of a specified set of goods and services between two economies. The quantities have to be homogeneous, and the relative levels for the different goods and services must be weighted by their economic importance as measured by their values in one or other or both economies.

**volume measure.** Volume measures are the real expenditures, the real expenditures per capita, and the volume indexes to which they give rise.