Chapter **21**

Validation of National Accounts Expenditures

Price data and national accounts data are the two pillars of the International Comparison Program (ICP). Because purchasing power parities (PPPs) are derived from price data using gross domestic product (GDP) expenditure values as weights, it is never possible to obtain sound PPP estimates without ensuring the quality of national accounts data. However, despite their importance, national accounts data did not receive as much attention in previous rounds of the ICP as in ICP 2011. In ICP 2011, a significant emphasis was placed on the quality of national accounts data and its validation to achieve soundness and consistency. This chapter deals with national accounts validation and follows on chapter 1 of this volume, which addresses the national accounts framework for the ICP.

DATA COLLECTED

The 1993 System of National Accounts (SNA93) was the national accounts framework for ICP 2011 (Commission of the European Communities et al. 1993). The data requirements were exactly the same as those for the ICP 2005 round, but the 2011 round had the advantage of being able to use 2005 (and 2009) data as a starting point. However, it is not useful to simply apply 2005 splits to 2011 data for broad aggregates. In the 2011 round, economies compiled the 2011 expenditure data at the basic heading level using 2011 source data when available. Simply applying the 2005 splits to the 2011 broad expenditure categories was a last resort. The preferred approach was to use directly obtained data (e.g., from a household expenditure survey) to estimate values for each basic heading, but if data were not available, the commodity flow method or best "guesstimate" (but not an equal split) was used.

To obtain accurate expenditure information, the ICP asked economies to provide metadata sources as well as documentation on adjustments, if any. Each economy estimated its own expenditures, and for each basic heading expenditures were directly obtained from the economy's national accounts and were expressed in national currency for the latest year available.

VALIDATION TOOLS

Based on the ICP national accounts forms (see the overall framework section in World Bank 2011), the ICP National Accounts Working Group (INAG) decided that a model reporting document for expenditure data and metadata—the Model Report on Expenditure Statistics (MORES)—should be used in the form of an economy case study that shows how basic expenditure values can be estimated at the basic heading level in practice.

Use of the MORES, as well as the National Accounts Quality Assurance Questionnaire and the Eurostat tabular approach to exhaustiveness, were ICP reporting requirements for the 2011 round. They were intended to support economies in their efforts to provide a detailed metadata report showing how expenditures were estimated for each basic heading.

MORES was mainly used for validation purposes in the following ways:

- *Economies*—to assist in splitting GDP, documenting the process, and reviewing the respective estimates and underlying metadata through edit and consistency checks during regular regional workshops. This two-year process sought to assist with the self-validation of each economy's data.
- *Regional coordinating agencies (RCAs)*—to review economy data and the underlying metadata during regular regional workshops, thereby providing a mechanism for making the intereconomy validation process smoother than the one in the ICP 2005 round. The RCAs ensured SNA93 compliance, consistency, and comparability.
- *Global Office*—to assist the regional offices and economies with the process of data validation (intra- and inter-) and to prepare a summary of the main findings and lessons learned and limitations of the basic heading estimates. These findings and lessons were reported on a regular basis to the Executive Board and the United Nations Statistical Commission (UNSC). A synthesis report was included in the final report. Overall, the global intereconomy validation included quality assurance, exhaustiveness, consistency, comparability, and a summary of main findings.

The National Accounts Quality Assurance Questionnaire was a set of 30 questions that covered 5 main subjects: (1) SNA93 compliance, (2) ICP requirements, (3) valuation rules, (4) price and national accounts consistency, and (5) recording rules (the full questionnaire appears in annex A).

The Eurostat tabular approach to exhaustiveness was designed by Eurostat, the statistical office of the European Union, in the late 1990s to identify potential sources of understatement in the national accounts stemming from omissions from the statistical source data used in compiling the accounts. The tabular approach provides a consistent and complete conceptual framework by classifying adjustments into seven types of "nonexhaustiveness." It also links the available compilation methods—such as employment method, fiscal audits, or value added tax (VAT) comparisons—to the nonexhaustiveness types. The distinction between the seven different "N-types" is not important in the sense that some things could potentially be classified under one heading instead of another. Rather, the important aspects are to ensure that all potential sources of omission from the accounts are identified and included in one of the categories and that there is no duplication across categories (see details in annex B).

VALIDATION PROCESS

The validation process for national accounts follows the same three-stage validation process (national, regional, and global) used for the household consumption survey and the price surveys for other GDP components (see table 21.1).

At each level or stage, the respective parties participate in the validation process. The national statistics offices conduct some data

Table 21.1 National Accounts Validation Types, ICP 2011

Level	Type of validation
National	*Intra-economy validation* National statistics office (1) reviews and evaluates expenditures and relevant metadata and (2) validates against System of National Accounts requirements vis-à-vis 2005.
Regional	*Intereconomy validation* Regional office reviews the expenditure values across economies and regions.
Global	*Global validation* Global Office reviews expenditure values of all economies across regions and combines them into a global data set.

Source: ICP, http://icp.worldbank.org/.

analysis and checking before providing the respective regional offices with the national accounts data. The regional offices match the basic heading values with prices to identify any data anomalies, and then the Global Office checks more broadly the consistency among regional data sets as they are combined into global results.

The sections that follow present an overview of, as well as the step-by-step process for, the different types of validation. Each arrow indicates a different type of action:

National Level

Before the national accounts data are sent to the regional offices, simple edits can be applied at the national statistics offices to save time at the regional offices. Three main types of checks should be undertaken: (1) SNA compliance, including comparing GDP expenditure data with United Nations Statistics Division (UNSD) databases, conducting data completeness checks (nonzero values), checking any negative values, ensuring the allocation of financial intermediation services indirectly measured (FISIM), checking the allocation of net expenditures, and conducting basic arithmetic checks; (2) price validation, including implementing price tracking for major products, verifying average price changes from 2005 to 2011, and checking the consistency of price level indexes (PLIs) across basic headings within an economy; and (3) an economic likelihood test such as verifying per capita basic heading expenditures and basic heading shares of GDP.

The Global Office recommends that the basic edits and consistency checks be conducted at the national level (table 21.2).

Table 21.2 General Recommendations from Global Office for National Accounts Validation, ICP 2011

Basic edit	Consistency check
International databases	Prices and expenditures
Compare GDP and major aggregates with international databases.	*Check plausibility for each basic heading.* Notional real expenditures = nominal expenditures/geometric mean of prices
Aggregation	Temporal
Check aggregations.	*Check plausibility for each basic heading.*
Check negative values.	Data from ICP 2005 can be used to identify outliers that have changed significantly more than the average for all basic headings.
Completeness	
Completeness checks, such as all basic headings containing nonzero values	*Check variations.* Compare variations of per capita notional real expenditure. 2005 → 2011
Per capita checks	
Deriving per capita value of real expenditures can also indicate areas that need to be examined for inconsistencies between prices and values.	

Source: ICP, http://icp.worldbank.org/.

What follows is the step-by-step process that is followed for the national accounts intra-economy validation.

Initial data validation (A) → **Finalization of data (B)**

Step A1 Check that the PLI, GDP, and its major aggregates correspond with the latest available official estimates.

Step A2 Check that all basic heading values have been supplied (including reference PPP basic headings) and flag or justify problematic basic headings when, for example, a value is genuinely not available (a rare event).

Step A3 Check that no basic heading has a zero value and flag or justify problematic basic headings.

Step A4 Check that the correct sign (+ or –) has been assigned to basic headings where a negative value is assigned when aggregating expenditures to gross capital formation or GDP. The basic headings that are likely to display a negative value according to the SNA are 111311.2, purchases by nonresidents in the economy; 130225.1, receipts from sales; 130425.1, receipts from sales; 140115.1, receipts from sales; 160111.1, opening value of inventories; 160211.2, disposals of valuables; and 170111.2, imports of goods and services. Flag or justify problematic basic headings.

Step A5 Check whether FISIM is allocated across intermediate and final uses and flag or justify problematic basic headings.

Step A6 Check whether net expenditures abroad are allocated across products within the household final consumption expenditure and flag or justify problematic basic headings.

Step A7 Analyze data and flagged cases that need to be corrected or approved.

Initial data validation (A) → **Finalization of data (B)**

Step B1 Repeat steps A1–A7.

Step B2 Check the temporal plausibility of each basic heading using 2005 data.

Step B3 Compute the variations of per capita notional real expenditures values for each economy and check the variations of per capita notional real expenditure for previous and current survey years.

Step B4 Submit data and metadata to the respective regional coordinating agencies.

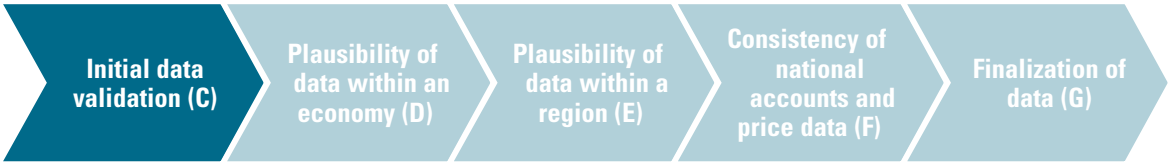
Regional Level

Intra-economy validation → **Intereconomy validation** → **Global validation**

All validation edits at the national level must be repeated at the regional level. The aim of the regional validation is to compare the consistency of data from similar economies within a region.

The RCA identifies clusters of economies using economically based and regionally agreed-on criteria. GDP per capita in 2005 has served as a key indicator of the group to which an economy is allocated.

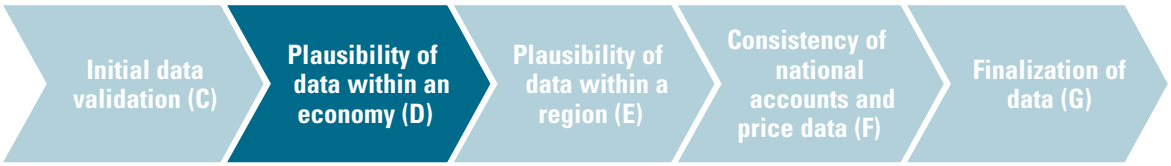
The step-by-step processes follow.



Step C1 Repeat steps A1–A6.

Step C2 Analyze data and correct or approve flagged cases.

Step C3 After receiving the edited data, review the results and repeat steps C1–C3 until the data are considered final.



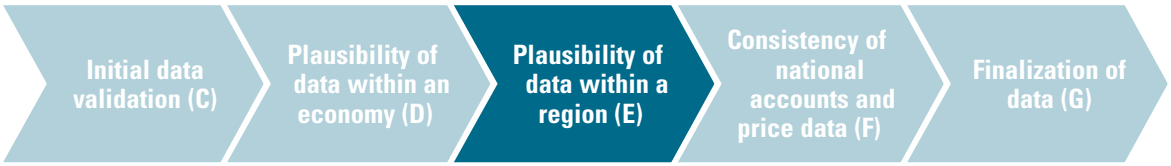
Step D1 Check that the GDP and its major aggregates correspond with the latest published (official) version and flag or justify problematic basic headings.

Step D2 Compare supplied national accounts data (GDP and its major aggregates) with the data of international organizations (stored in the UNSD database) and flag or justify problematic basic headings.

Step D3 Conduct a temporal comparison between the previous and current ICP rounds of supplied national accounts data and flag or justify problematic basic headings.

Step D4 Analyze data for flagged cases.

Step D5 After receiving the edited data, review the results and repeat steps D1–D5 until the data are considered final.



Step E1 Form clusters of similar economies within a region—the 2005 GDP per capita or latest year data, for example, were a key indicator of the group to which an economy would be assigned.

Step E2 Compare shares of GDP attributed to each basic heading among economies in each cluster and flag problematic basic headings.

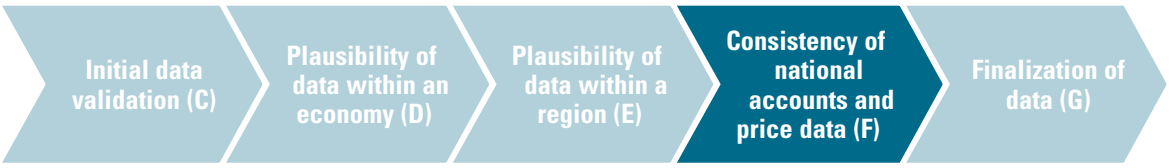
Step E3 Compare the basic heading shares of real expenditures (in national currency) among the economies in each cluster and flag problematic basic headings.

Step E4 Compare per capita real expenditures and their variation for each basic heading among the economies in each cluster and flag problematic basic headings.

Step E5 Analyze data for flagged cases and request either justification or correction.

Step E6 Analyze the requests and correct or approve the data and submit.

Step E7 After receiving the edited data, review the results and repeat steps E1–E7 until the data are considered final.

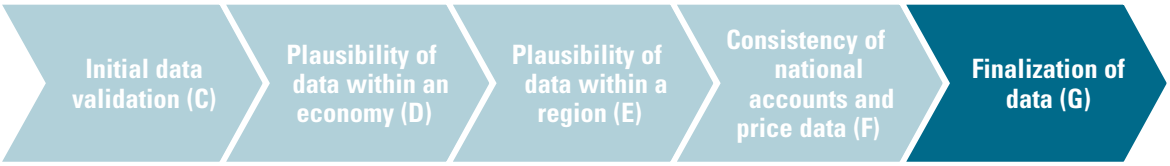


Step F1 Repeat steps B2 and B3.

Step F2 Analyze identified differences in the MORES and consider whether they derive from national accounts or price data. Query economies based on the analysis.

Step F3 Analyze requests and correct or approve the data and submit.

Step F4 After receiving the edited price data from the economies, review the results and repeat steps F1–F4 until the data are considered final.



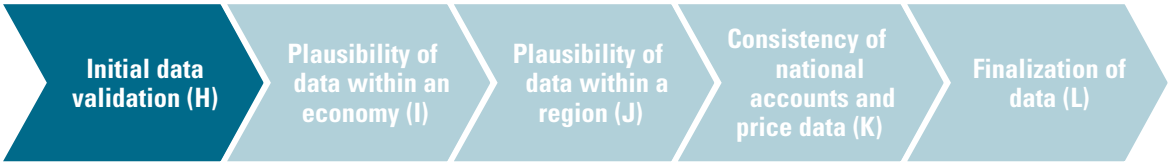
Step G1 Confirm that data and metadata are intereconomy validated.

Step G2 Submit price data and metadata to the Global Office.

Global Level

The global comparison of real expenditures (and their per capita equivalents) is the result of the process of linking regional results together to produce worldwide results.

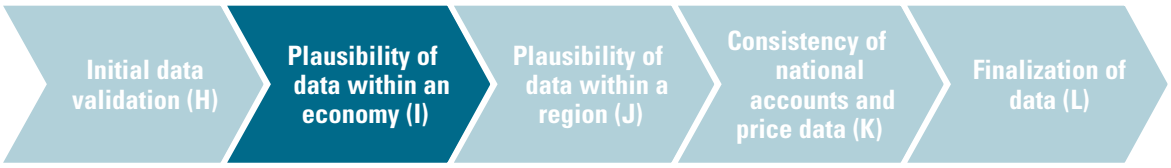
At the global level, the same intra-economy validation processes as previously defined are followed. The intereconomy validation process is also followed across economies and within and between regions.



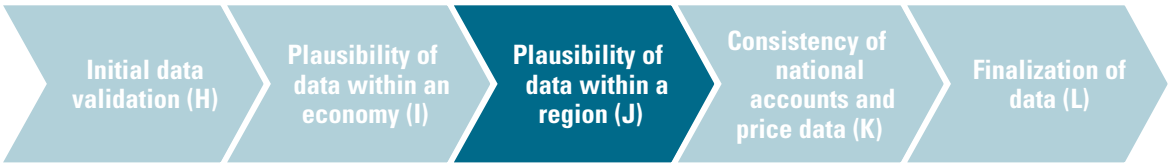
Step H1 Repeat steps A1–A7.

Step H2 Analyze requests and correct or approve data and submit.

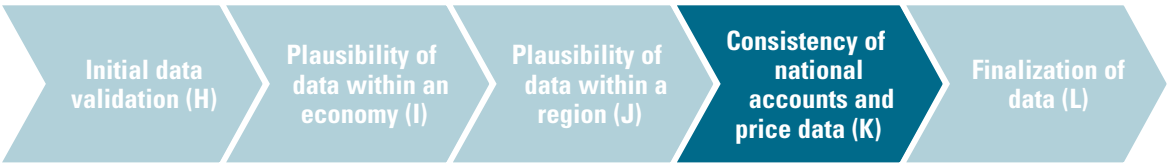
Step H3	After receiving the edited data, review the results and repeat steps H1–H3.
Step H4	After receiving the edited price data, review the results and repeat steps H1–H4 until the data are considered final.



Step I1	Check that the GDP and its major aggregates correspond with the latest published (official) version and flag problematic cases.
Step I2	Compare the supplied national accounts data (GDP and its major aggregates) with the data of international organizations (stored in the UNSD database) and flag problematic cases.
Step I3	Conduct a temporal comparison between the previous and current ICP rounds of the supplied national accounts data and flag problematic cases.
Step I4	Analyze the data for flagged cases and request a justification or correction.
Step I5	Analyze requests and correct or approve data and submit.
Step I6	After receiving the edited data, review the results and repeat steps I1–I6 until the data are considered final.



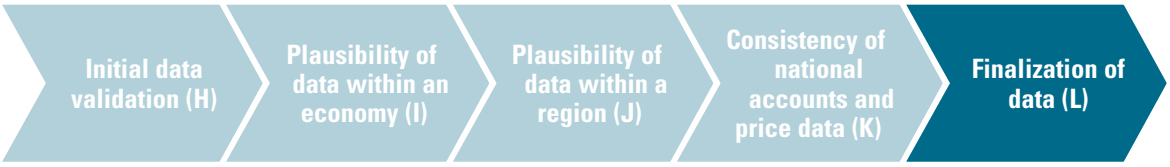
Step J1	Form clusters of similar economies within a region using, for example, GDP per capita.
Step J2	Compare shares of GDP attributed to each basic heading among the economies in each cluster and flag problematic cases.
Step J3	Compare the basic heading shares of real expenditures (in national currency) among the economies in each cluster and flag problematic cases.
Step J4	Compare the per capita real expenditures for each basic heading between the economies in each cluster and flag problematic cases.
Step J5	Compare the variations in per capita real expenditures for each basic heading among the economies in each cluster and flag problematic cases.
Step J6	Analyze the data for flagged cases and request a justification or correction.
Step J7	Analyze requests and correct or approve data and submit.
Step J8	After receiving the edited data, review the results and repeat steps J1–J8 until the data are considered final.



Step K1 Analyze identified differences in the MORES and consider whether they are derived from national accounts or price data.

Step K2 Analyze requests and correct or approve data and submit.

Step K3 After receiving the edited price data from the economies, repeat steps K1–K3 until the data are considered final.



Step L1 Confirm data and metadata as final.

Step L2 Use price data for final calculations.

Annex A

National Accounts Quality Assurance Questionnaire, ICP

Economy:				
		Yes	No	Comments
Q01	Do you implement the 1993 System of National Accounts (SNA)?	✓		
Q02	Does your estimate of GDP cover the full range of economic activities and transactions that are included in the production boundary of the 1993 SNA?	✓		
Q03	Do your estimates of final expenditures on GDP cover all basic headings as defined in the ICP expenditure classification and in line with the 1993 SNA?			
Q04	Does the price survey framework provide national annual average prices for the basic headings defined in the ICP expenditure classification that are consistent with the prices underlying the expenditures on the basic headings?			
Q05	Do you classify institutional sectors in line with the 1993 SNA?			
Q06	In general, are transactions valued at the actual prices agreed on by the transactors—that is, at purchasers' prices?		✓	
Q07	Are imputed rentals valued in accordance with the guidelines in the ICP Operational Material?			
Q08	Are goods produced on own account for consumption by the household valued at basic prices?			
Q09	Is income in kind valued at purchasers' prices if the employer has purchased the goods or services and at producers' prices if the goods or services have been produced by the enterprise itself?			
Q10	Is the individual consumption expenditure of nonprofit institutions serving households valued as the sum of the costs of production, including the consumption of fixed capital?			
Q11	Is the production of individual services by government valued as the sum of the costs of production, including the consumption of fixed capital?			
Q12	Are the purchases of goods and services by government that are passed on to households without any further processing by government valued at purchasers' prices?			
Q13	Is the collective consumption expenditure by government valued as the sum of the costs of production, including the consumption of fixed capital?			
Q14	Is gross fixed capital formation valued at purchasers' prices?			
Q15	Is own-account production of fixed capital assets valued at basic prices?			
Q16	Is change in inventories valued as the change in the physical quantities at the beginning and end of the year using either the average of prices over the year or the prices prevailing at the middle of the year?			
Q17	Are total imports and exports valued on an f.o.b. (free on board) basis?			
Q18	Are transactions in foreign currency converted using the midpoint exchange rate prevailing in the market at the moment they take place?			
Q19	Are the prices used in the national accounts national annual average prices, or, if they are not, are they adjusted to national annual average prices by accepted procedures?			
Q20	Are transactions and flows recorded on an accrual basis?			
Q21	Is work in progress recorded in the period it is produced?			
Q22	Are government-related transactions recorded on an accrual basis—in particular, taxes and subsidies on products and expenditures?			
Q23	Does gross fixed capital formation consist of net acquisitions (acquisitions less disposals) of fixed assets?	✓	✓	
Q24	Are valuables measured as acquisitions less disposals?		✓	
Q25	Are transaction prices measured net of discounts or rebates?		✓	

table continues next page

Annex A *(Continued)*

Economy:				
		Yes	No	Comments
Q26	Do the statistical procedures used by your office to adjust the country final expenditure data to meet ICP requirements follow a detailed, case-by-case approach, using specific sources that are those most closely related to the estimated variables and pertinent to the reference period?		✓	
Q27	Do you maintain and disseminate detailed methodological notes about your national accounts compilation process?		✓	
Q28	Has your country compiled supply-use tables (SUTs)?	✓		
		Reference year	Number of products	
Q29	If yes, please indicate the reference year of the latest one, as well as the number of products (rows) in the SUT.			
Q30	Please indicate the reference year of the most recent household expenditure survey.			

Annex B

Eurostat Tabular Approach to Exhaustiveness

Seven types of "nonexhaustiveness"
Not registered
N1—Producer deliberately not registered (underground activity)
The producer does not register in order to avoid tax and social security obligations or to avoid losing some social benefits. Typically, this category includes small producers with incomes above the threshold set for registration. Producers who do not register because they are engaged in illegal activities should be classified as N2, and producers who deliberately misreport their activities should be classified as N6.
The methods that can be used to estimate the adjustments required include labor inputs (from household-based labor force surveys), commodity flows, and supply-use tables.
N2—Producer deliberately not registered (illegal activity)
The producer deliberately fails to register because he or she is involved in illegal activities such as prostitution, selling stolen goods, dealing in drugs, smuggling, or illegal gambling. This category excludes any illegal production not reported by registered producers (which should be classified as N6) and illegal production by units not required to register (classified as N3).
The methods that can be used to estimate the adjustments are the quantity-price method, unit per input or use, and expert judgment.
N3—Producer not required to register
Such producers are not required to register because they do not have any market output, or it is below a set threshold. Activities include production for own final consumption; own fixed capital formation, including construction of own dwelling; and repairs to dwelling. They also include market output of households that is below the level at which the producer is obliged to register as a business, paid domestic service, and so forth. No adjustment is necessary if the estimation method for a particular activity (or survey) implicitly takes into account the nonregistered activity.
The methods that can be used to estimate adjustments are household expenditure surveys, building permits, commodity flow methods, administrative data, and time use surveys.
Not surveyed
N4—Legal producers not surveyed
Legal producers who may be registered can still be excluded from statistical surveys. For example, the producer may be newly registered and not yet recorded on the business register because the register-updating procedures may be slow or inadequate. On the other hand, a producer may be recorded on the business register but still excluded from the survey frames because the classification data used in developing the frames (e.g., activity code, size of business, geographic location) may be wrong, or there may be a size cutoff that precludes the producer from being selected to participate in a particular survey.
The methods that can be used to estimate adjustments are surveys of the quality of the business register, reviews of the lags involved in update procedures and whether they change over time, or cross-checks of the business register against other administrative sources of businesses.
N5—Registered entrepreneurs not surveyed
Registered entrepreneurs (e.g., consultants, private writers, freelance journalists) may not be recorded in the business register either because of a deliberate failure to do so or because the register-updating sources do not include details on such persons. Even if their details are recorded in the business register, they may be excluded from statistical surveys either because of errors in the details recorded (e.g., activity code, size of business, geographic location) or because of the small size of their individual activities.
The methods that can be used to estimate adjustments are surveys of the quality of the register, cross-checks against other administrative sources (e.g., income tax statements), or specialized surveys.
Misreporting
N6—Misreporting by producer
Misreporting involves underreporting gross output (and therefore revenues) or overreporting intermediate consumption (and therefore the costs of production) in order to avoid paying income tax, other taxes such as the value added tax (VAT), or social security contributions. Misreporting may involve maintaining two sets of books to conceal the full extent of sales, hidden secondary activities, cash settlements for sales that are unrecorded because no receipts are given, VAT fraud, salaries paid in cash to avoid overhead (so-called envelope salaries), or salaries recorded as external contractual services.
The methods that can be used to estimate adjustments are data from tax audits, comparisons of average salaries and profits for similar businesses, comparisons of input/output ratios with those of similar businesses, special surveys, or expert judgments on the accounting relationships expected to be observed in such businesses.
Other
N7—Other statistical deficiencies
This category can be divided into two parts: data that are incomplete or cannot be directly collected from surveys or data that are incorrectly compiled during survey processing.
The items that should be considered in determining the adjustments to be made include how nonresponse was taken into account, the extent to which wages and salaries were paid in kind, production for own final use by market producers, tips, valuation techniques, and adjustments for accruals.

Exhaustiveness Checks and Adjustments

Economy name:	Initial national accounts estimates	Adjustments		
		N1	N2	N3
		Nonregistration (underground activity)	Nonregistration (illegal activity)	Producer not required to register
	Complete for those accounts compiled.	Insert adjustment factor (in %) if available;		
PRODUCTION APPROACH				
Output of goods and services (basic prices)				
A Agriculture, hunting, and forestry				
B Fishing				
C Mining and quarrying				
D Manufacturing				
E Electricity, gas, and water supply				
F Construction				
G Wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods				
H Hotels and restaurants				
I Transport, storage, and communications				
J Financial intermediation				
K Real estate, renting, and business activities				
L Public administration and defense; compulsory social security				
M Education				
N Health and social work				
O Other community, social, and personal service activities				
P Private households with employed persons				
Q Extraterritorial organizations and bodies				
Intermediate consumption (purchasers' prices)				
A Agriculture, hunting, and forestry				
B Fishing				
C Mining and quarrying				
D Manufacturing				
E Electricity, gas, and water supply				
F Construction				
G Wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods				
H Hotels and restaurants				
I Transport, storage, and communications				
J Financial intermediation				
K Real estate, renting, and business activities				
L Public administration and defense; compulsory social security				
M Education				

N4	N5	N6	N7	Total	Final national accounts estimates	
Legal producers not surveyed	Registered entrepreneurs not surveyed	Misreporting by producers	Other statistical deficiencies			
"N" if there is nonexhaustiveness but not yet estimated.					Complete for area adjusted for exhaustiveness.	Provide comments if needed.

table continues next page

Economy name:	Initial national accounts estimates	Adjustments		
		N1	N2	N3
		Nonregistration (underground activity)	Nonregistration (illegal activity)	Producer not required to register
	Complete for those accounts compiled.	Insert adjustment factor (in %) if available;		
N Health and social work				
O Other community, social, and personal service activities				
P Private households with employed persons				
Q Extraterritorial organizations and bodies				
Gross value added (basic prices)				
A Agriculture, hunting, and forestry				
B Fishing				
C Mining and quarrying				
D Manufacturing				
E Electricity, gas, and water supply				
F Construction				
G Wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods				
H Hotels and restaurants				
I Transport, storage, and communications				
J Financial intermediation				
K Real estate, renting, and business activities				
L Public administration and defense; compulsory social security				
M Education				
N Health and social work				
O Other community, social, and personal service activities				
P Private households with employed persons				
Q Extraterritorial organizations and bodies				
Taxes on products				
Value added–type taxes				
Other taxes on products				
Subsidies on products				
Residual item				
Gross domestic product				
EXPENDITURE APPROACH				
Total final expenditure				
Household final consumption				
01 Food and nonalcoholic beverages				
02 Alcoholic beverages, tobacco, and narcotics				
03 Clothing and footwear				
04 Housing; water; electricity, gas, and other fuels				

					Final national accounts estimates	
N4	N5	N6	N7	Total		
Legal producers not surveyed	Registered entrepreneurs not surveyed	Misreporting by producers	Other statistical deficiencies			
"N" if there is nonexhaustiveness but not yet estimated.					Complete for area adjusted for exhaustiveness.	Provide comments if needed.

table continues next page

Economy name:	Initial national accounts estimates	Adjustments		
		N1	N2	N3
		Nonregistration (underground activity)	Nonregistration (illegal activity)	Producer not required to register
	Complete for those accounts compiled.	Insert adjustment factor (in %) if available;		
05 Furnishings, household equipment, and routine household maintenance				
06 Health				
07 Transport				
08 Communication				
09 Recreation and culture				
10 Education				
11 Restaurants and hotels				
12 Miscellaneous goods and services				
Final consumption, nonprofit institutions serving households (NPISHs)				
General government final consumption				
Gross capital formation				
Gross fixed capital formation				
Changes in inventories				
Acquisition less disposals of valuables				
Exports of goods and services				
Goods				
Services				
Imports of goods and services				
Goods				
Services				
Statistical discrepancy (residual item)				
Gross domestic product				
INCOME APPROACH				
Compensation of employees				
Gross operating surplus and mixed income				
Taxes on production and imports				
Subsidies				
Statistical discrepancy (residual item)				
Gross domestic product				
Compensation of employees received from rest of world (ROW)				
Compensation of employees paid to ROW				
Property income received from ROW				
Property income paid to ROW				
Taxes on production and imports subsidies				
Gross national income				

Source: ICP, http://icp.worldbank.org/.

					Final national accounts estimates	
N4	N5	N6	N7	Total		
Legal producers not surveyed	Registered entrepreneurs not surveyed	Misreporting by producers	Other statistical deficiencies			
"N" if there is nonexhaustiveness but not yet estimated.					Complete for area adjusted for exhaustiveness.	Provide comments if needed.

REFERENCES

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and World Bank. 1993. *System of National Accounts 1993*. http://unstats.un.org/unsd/sna1993/toctop.asp?L1=5.

World Bank. 2011. "The ICP and National Accounts Practices." http://siteresources.worldbank.org/ICPINT/Resources/270056-1255977254560/6483625-1273849421891/101005_ICP-OM_NAPractices-New.pdf.