

Government Services

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This chapter describes the information on government services required for the International Comparison Program (ICP). Because chapter 3 covers the expenditure weights needed for government consumption expenditures, that material is not repeated here. The chapter focuses mainly on the price information needed for government and, in particular, the data needed on compensation of government employees.

The chapter is broken down into two major sections—the 2005 ICP round and the 2011 round. It includes an overview of how government is treated in the ICP, covering both the collective and individual expenditures of government. However, some of government’s individual expenditures on health and education services are covered in more detail in chapter 11.

ICP 2005

This section describes the procedures followed for the 2005 round of the ICP.

Definition of General Government

“General government” is the term used in the 1993 *System of National Accounts* (SNA)¹ to describe the “Institutional Sector” consisting of central, federal, regional, state, and local government units, and any social security funds controlled by these units. The armed forces and nonprofit institutions controlled and mainly financed by government are also included in the general government sector. These institutions vary from country to country, but they often are hospitals, clinics, schools, and universities. The nonprofit institutions included in “general government” should not be confused with the nonprofit institutions serving households (NPISH), which are financed by households and which form a separate institutional sector in the SNA. The kinds of bodies classified as NPISH typically include trade unions, religious organizations, and political parties.

The 1993 SNA provides for subsectors of general government—central, federal, state, and local governments, and social security funds, depending on the constitutional arrangements in each country. For the ICP, however, no subsectoring is required, and PPPs are calculated for general government as a whole. It is assumed that the prices of goods and services acquired by government are the same no matter which the level of government acquired them. Similarly, the data on compensation of employees are averages of compensation paid to government employees in a given occupation at each level of government for which that occupation is relevant. For simplicity's sake, the term *government* is used in this chapter to refer to the SNA institutional sector “general government.”

Individual and Collective Services

Government final consumption expenditures are divided between two main aggregates in the ICP expenditure classification: individual services and collective services. They are distinguished because the individual consumption expenditure by government is one of three components of *actual individual consumption*, the other components being individual consumption expenditure by households and individual consumption expenditure by NPISH. Actual individual consumption measures what households consume rather than what they purchase (see chapter 3 on national accounts and chapter 11 on health and education expenditures). In the ICP, comparisons of household consumption are made using actual individual *consumption* rather than individual consumption *expenditure*. Countries differ widely in the extent to which government provides households with education, health, and other individual services. Actual household consumption is therefore more comparable between countries than household expenditure.

Individual Services

Expenditures on individual services constitute the *individual consumption expenditure by government*. Individual services are those that governments provide to households on an individual basis such as health and education. Some households benefit from these services while others do not. Collective services are provided to everyone on an equal basis; examples are defense, law and order, and research and development. No one household can consume more of these services than another household. The distinction between individual services and collective services is made by reference to the Classification of the Functions of Government (COFOG) 1998 classification (United Nations 2000). Table 15.1 lists individual and collective services by COFOG group. The functions of government defined as individual are denoted by “IS.”

Individual consumption expenditure by government takes two forms:

1. The production of services by government for the benefit of individual households. Examples are running schools and hospitals. Here the government is itself organizing and financing the production of services for consumption by individual households.
2. The purchase of goods and services by government from other producers that are then passed on to households, either free or at prices below the costs of production, without any further processing by the government. Examples are medicines and medical services for outpatients. Some households receive these goods and services free or at very low prices at the point of delivery; other households pay the full price at the point of delivery and are later reimbursed, in part or in full, by the government. For the ICP, the purchase by government of goods and services for delivery to households is relevant for two functions: health and education. In the expenditure classification, they are described as *health benefits and reimbursements* and as *education benefits and reimbursements*.

TABLE 15.1 Collective Services (CS) and Individual Services (IS), COFOG Groups

COFOG group	COFOG group
01. GENERAL PUBLIC SERVICES	05. ENVIRONMENT PROTECTION
01.1 Executive and legislative organs, financial and fiscal affairs, external affairs (CS)	05.1 Waste management (CS)
01.2 Foreign economic aid (CS)	05.2 Waste water management (CS)
01.3 General services (CS)	05.3 Pollution abatement (CS)
01.4 Basic research (CS)	05.4 Protection of biodiversity and landscape (CS)
01.5 R&D general public services (CS)	05.5 R&D environment protection (CS)
01.6 General public services n.e.c. (CS)	05.6 Environment protection n.e.c. (CS)
01.7 Public debt transactions (CS)	06. HOUSING AND COMMUNITY AMENITIES
01.8 Transfers of a general character between different levels of government (CS)	06.1 Housing development (CS)
02. DEFENSE	06.2 Community development (CS)
02.1 Military defense (CS)	06.3 Water supply (CS)
02.2 Civil defense (CS)	06.4 Street lighting (CS)
02.3 Foreign military aid (CS)	06.5 R&D housing and community amenities (CS)
02.4 R&D defense (CS)	06.6 Housing and community amenities n.e.c. (CS)
02.5 Defense n.e.c. (CS)	07. HEALTH
03. PUBLIC ORDER AND SAFETY	07.1 Medical products, appliances, and equipment (IS)
03.1 Police services (CS)	07.2 Outpatient services (IS)
03.2 Fire protection services (CS)	07.3 Hospital services (IS)
03.3 Law courts (CS)	07.4 Public health services (IS)
03.4 Prisons (CS)	07.5 R&D health (CS)
03.5 R&D public order and safety (CS)	07.6 Health n.e.c. (CS)
03.6 Public order and safety n.e.c. (CS)	08. RECREATION, CULTURE, AND RELIGION
04. ECONOMIC AFFAIRS	08.1 Recreational and sporting services (IS)
04.1 General economic, commercial, and labor affairs (CS)	08.2 Cultural services (IS)
04.2 Agriculture, forestry, fishing, and hunting (CS)	08.3 Broadcasting and publishing services (CS)
04.3 Fuel and energy (CS)	08.4 Religious and other community services (CS)
04.4 Mining, manufacturing, and construction (CS)	08.5 R&D recreation, culture, and religion (CS)
04.5 Transport (CS)	08.6 Recreation, culture, and religion n.e.c. (CS)
04.6 Communication (CS)	09. EDUCATION
04.7 Other industries (CS)	09.1 Preprimary and primary education (IS)
04.8 R&D economic affairs (CS)	09.2 Secondary education (IS)
04.9 Economic affairs n.e.c. (CS)	09.3 Postsecondary nontertiary education (IS)
	09.4 Tertiary education (IS)
	09.5 Education not definable by level (IS)
	09.6 Subsidiary services to education (IS)
	09.7 R&D education (CS)
	09.8 Education n.e.c. (CS)

(continued)

TABLE 15.1 Collective Services (CS) and Individual Services (IS), COFOG Groups
(continued)

COFOG group	COFOG group
10. SOCIAL PROTECTION	10.5 Unemployment (IS)
10.1 Sickness and disability (IS)	10.6 Housing (IS)
10.2 Old age (IS)	10.7 Social exclusion n.e.c. (IS)
10.3 Survivors (IS)	10.8 R&D social protection (CS)
10.4 Family and children (IS)	10.9 Social protection n.e.c. (CS)

Source: Classification of the Functions of Government (COFOG), United Nations Statistical Division.
Note: R&D = research and development; n.e.c. = not elsewhere classified.

Collective Services

Government consumption expenditure that is not individual is termed collective. As shown in table 15.1 (highlighted in gray and denoted by “CS”), collective government expenditures mainly fall under the broad headings of general public services, defense, public order and safety, economic affairs, and environmental protection, but they also include certain expenditures under housing, health, recreation and culture, education, and social protection that are considered to benefit the community at large. These expenditures are directed at formulating and administering government policy at the national level, at research and development, and at setting up and enforcing safety, environmental, or other standards.

By contrast with individual consumption expenditures, collective consumption expenditures take one form only: the production of services by the government. Collective consumption expenditures do not involve the purchase of goods and services for delivery to households.

ICP Basic Headings for Government

Table 15.2 shows government expenditure broken down into 26 basic headings: 21 cover expenditures on individual services; five cover expenditures on collective services. Three kinds of basic headings are shown:

1. *Health benefits and reimbursements.* This basic heading consists of goods and services, just like the other basic headings in the ICP expenditure classification.
2. *Production of health, education, and collective services.* These basic headings consist of the costs of producing these services.
3. Other groups: *housing, recreation and culture, education benefits and reimbursements, and social protection.* These basic headings consist of the total costs of providing these services: compensation of employees, intermediate consumption, gross operating surplus, net taxes on production, and receipts from sales.

For most of the basic headings in table 15.2—that is, those indicated with an asterisk (*)—no price data were required because purchasing power parities (PPPs) were obtained using reference PPPs. Reference PPPs are PPPs that were calculated for similar basic headings in other parts of the ICP expenditure classification (see chapter 17 for more details on reference PPPs).

TABLE 15.2 ICP Basic Headings for Individual Services and Collective Services

INDIVIDUAL SERVICES	
Housing	Recreation and culture
130111.1 Housing*	130311.1 Recreation and culture*
Health benefits and reimbursements	Education benefits and reimbursements
130211.1 Pharmaceutical products	130411.1 Education benefits and reimbursements*
130211.2 Other medical products	Production of education services
130211.3 Therapeutic appliances and equipment	130421.1 Compensation of employees
130212.1 Outpatient medical services	130422.1 Intermediate consumption*
130212.2 Outpatient dental services	130423.1 Gross operating surplus*
130212.3 Outpatient paramedical services	130424.1 Net taxes on production*
130212.4 Hospital services*	130425.1 Receipts from sales*
Production of health services	Social protection
130221.1 Compensation of employees	130511.1 Social protection*
130222.1 Intermediate consumption*	
130223.1 Gross operating surplus*	
130224.1 Net taxes on production*	
130225.1 Receipts from sales*	
COLLECTIVE SERVICES	
140111.1 Compensation of employees	140114.1 Net taxes on production*
140112.1 Intermediate consumption*	140115.1 Receipts from sales*
140113.1 Gross operating surplus*	

Source: ICP.

Note: Asterisk (*) indicates that no price data were required because PPPs were obtained using reference PPPs.

Price Data

This section provides an overview of the data collected and used for the estimation of PPPs for the government sector.

Health Benefits and Reimbursements

Governments in many countries purchase health services, pharmaceuticals, and other medical goods from market producers, and then pass them on to particular groups of households either free or at much reduced prices. This activity is financed differently from country to country. Some governments buy the goods or services directly from the producers and provide them without charge to households; other governments reimburse households, in full or in part, after the households themselves have made the purchase.

In the ICP, the prices paid for these goods and services are collected and used to calculate PPPs in the same way as PPPs for other goods and services. In all cases, the prices to be collected are the “total price.” In countries in which households pay the whole purchaser’s price to the market producer prior to being either completely or partially reimbursed by the government, the total price is the price that households pay before reimbursement (see chapter 11 on health and education).

In countries in which households pay only a portion of the purchaser's price to the market producer and the remainder is paid to the market producer by the government, the total price is the sum of the nonreimbursable part paid by households and the part paid by government. Suppose, for example, that households purchased 1,000 units of a pharmaceutical product and that the price per unit was €10, of which households paid €2 and the government €8. In the national accounts, €2,000 would be recorded as a household expenditure and €8,000 as a government expenditure. If the prices actually paid—that is, €2 by households and €8 by government—were used to deflate these expenditures, it would seem that both households and government each purchased 1,000 units or 2,000 units in total. But if the total amount paid—€10—was used, households would be shown, correctly, as having purchased 200 units and the government 800 units, for a total of 1,000 units.

In table 15.2, the last item shown under health benefits and reimbursements is hospital services. This item covers the provision of the medical services, pharmaceuticals, and such that patients who stay overnight in hospitals receive over the course of their treatment. The quality of and the ways in which these services are provided differ greatly from country to country, and in the past it has proved very difficult to collect internationally comparable prices for hospital services. For that reason, a reference PPP was used for this item in the 2005 ICP.

To summarize, prices are required only for the following basic headings: 130211.1, pharmaceutical products; 130211.2, other medical products; 130211.3, therapeutic appliances and equipment; 130212.1, outpatient medical services; 130212.2, outpatient dental services; and 130212.3, outpatient paramedical services. These goods and services are also basic headings under the household final consumption expenditure (basic headings 110611.0 to 110623.1), so that the same prices were used to calculate PPPs for both household and government expenditures.

Production of Health, Education, and Collective Services

In the national accounts, government services are valued at their costs of production, and the same approach is used in calculating PPPs for the ICP. In other words, the PPPs for production of government services were obtained by comparing the costs of producing them.

The costs of producing government services are (1) compensation of employees, (2) intermediate consumption, (3) net taxes on production, (4) gross operating surplus, and (5) (as a negative figure) receipts from sales.

Intermediate consumption covers a wide range of goods and services such as printing supplies, office rent, computer services, office cleaning, electricity, and so on. Intermediate consumption of defense services includes the purchase of weapons such as artillery pieces, rockets, warships, tanks, and war planes. Reference PPPs were used for this basic heading.

Net taxes on production consist of value added and sales taxes; duties on imports; taxes on the ownership of land, buildings, or other assets used in production; and taxes on the numbers of employees. Subsidies on production are considered to be negative taxes and so are deducted. In most countries, net taxes on the production of government services are insignificant or zero; they are included in table 15.2 mainly for completeness. Reference PPPs were used for this basic heading.

Gross operating surplus consists of net operating surplus plus consumption of fixed capital. In most countries, the net operating surplus is insignificant or zero, and so this item consists only of consumption of fixed capital. Consumption of fixed capital is the decline in value through wear and tear and obsolescence of government-owned buildings, roads, bridges and other structures, and of machinery and equipment such as computers, motor vehicles, and diagnostic equipment used in government hospitals. Reference PPPs were used for this basic heading.

Receipts from sales cover items such as partial charges for education and health services, passport fees, and entrance charges for museums. These expenditures are recorded under the household

final consumption expenditure or the intermediate consumption of enterprises and so must be deducted from the government consumption expenditure. Receipts from sales are shown as a basic heading in table 15.1 for both individual and collective services, although in practice most receipts from sales will come under individual services. Reference PPPs were used for this basic heading.

Compensation of employees is the largest component of the costs of producing government services, and it is the only cost component for which “prices” were collected. Compensation of employees was reported for a selection of occupations in government, public education, and public health services. The ICP’s Global Office, situated at the World Bank, selected the occupations, and countries in all regions used the same list. The intention was to represent the various education and skill levels commonly found among employees working in these government services.

Table 15.3 lists the 50 occupations used for the 2005 ICP round. They are based on the 1988 International Standard Classification of Occupations (ISCO-88), issued by the International

TABLE 15.3 Standard Government Occupations, ICP

Health services	213 Policeman/woman
101 Doctor, head of department	214 Prison guard
102 Doctor (20 years of seniority)	215 Fire fighter
103 Doctor (10 years of seniority)	216 Social worker
104 Nurse, head of department	217 Town planner
105 Nurse, operating theatre	218 Civil engineer
106 Nurse	219 Draftsman/draftswoman
107 Nursing auxiliary	220 Construction laborer
108 Physiotherapist	221 Chauffeur
109 Laboratory assistant	222 Agricultural scientist
110 Hospital chief executive	223 Librarian
111 Secretary (hospital)	224 Database administrator
112 Cook (not head cook)	225 Web administrator
113 Community health worker	226 Bodyguard (protecting senior officials)
Collective services	Education services
201 Finance department manager	301 Kindergarten teacher
202 Executive official (skill level III)	302 Primary teacher
203 Executive official (skill level IV)	303 Secondary teacher
204 Computer operator	304 University lecturer
205 Bookkeeping clerk	305 Head teacher
206 Data entry clerk	Defense services
207 Secretary (not hospital)	401 Army: private of infantry
208 Telephone switchboard operator	402 Army: commander of infantry regiment
209 Messenger	403 Navy: able seaman
210 Maintenance electrician	404 Navy: commander of frigate
211 Building caretaker	405 Air force: airman (ground crew)
212 Cleaner	406 Air force: fighter pilot/wing commander

Source: ICP.

Labour Organization (ILO) in 1990. Occupations are described in terms of the kind of work done. For two occupations, the length of time that the person has served in the post was specified: 102 (doctor with 20 years of seniority) and 103 (doctor with 10 years of seniority). For all other occupations, five years of seniority was used.

Several of the occupations in table 15.3 are relevant to more than one type of service. For example, nurses are primarily relevant to health services, but they also may be employed in schools. And secretaries, cleaners, and drivers are employed in the production of education, health, and collective services. Thus the information on compensation of employees for these and other occupations was used to calculate PPPs for more than one basic heading.

PPPs were calculated for each basic heading by taking the unweighted geometric averages of the price relatives for all the relevant occupations. Thus, for example, the PPP for basic heading 130421.1 (compensation of employees for the production of education services) was based on the six occupations 301–305 and on occupations 106, 201–212, and 216 because persons with these occupations are also employed in schools and universities.

The compensation of employees that participating countries were to report for the selected occupations is defined in box 15.1. It is consistent with the compensation of employees as defined in the 1993 SNA except in two respects. First, overtime payments were excluded from gross salaries and wages. Experience has shown that it is very difficult to obtain data on overtime that are comparable across countries. Although this omission resulted in volume measures that were marginally too high, their comparability was judged to be improved by ignoring overtime. Second, the only benefits in kind taken into account were the provision of free or subsidized housing and food or meals. Other forms of income in kind were both difficult to evaluate in ways that were internationally comparable and insignificant in the majority of countries.

BOX 15.1 Compensation of Government Employees

Compensation of government employees includes all payments in cash and in kind made by government in a year. These payments comprise the following:

- *Gross salaries and wages in cash* are recorded before deduction of taxes and social contributions payable by employees. They cover:
 - Basic salaries and wages as laid down in government salary scales (the note to table 15.4 explains how salary scales are used for this purpose).
 - Other payments over and above the basic salary or wage such as housing or residence allowance, passage or leave allowance, family allowance, special duty allowance or acting allowance, and 13th month pay and other cash payments except overtime payments (as noted earlier, it is very difficult to obtain data on overtime that are comparable across countries, and so overtime payments were excluded in the 2005 ICP).
- *Income in kind* covers things such as free or subsidized housing, meals, transport allowance, uniforms, and other items of clothing. Many of these benefits are difficult to evaluate because they can vary from one government institution to another. As a practical matter, only two kinds of income in kind were included in compensation of employees for the 2005 ICP: the provision of free or subsidized *housing* and free or subsidized *food or meals*. These items were valued at the cost to the employer of providing them. This was the cost of production when the items concerned were produced by the employer and the purchaser's price when they were bought by the employer and passed on to the employee.
- *Employers' actual social contributions* are payments made by governments to benefit their employees; they cover contributions for old-age pensions and for insurance against illness, accident, and disability. Contributions are calculated on the basis of the schemes in operation in each country. The governments of many countries, however, do not make any actual social contributions on behalf of their employees, and so this item was zero for those countries.
- *Imputed social contributions* are required in countries in which government employees receive social benefits such as pensions and health insurance, but the government does not make any payments into a social security fund to provide these benefits. Imputed social contributions are estimates of how much the government would have had to pay into a fund to provide the social benefits being provided to government employees. These estimates, or "imputations," were made in the same way as the corresponding imputations were made in the national account.

The compensation of employees reported for the selected occupations was calculated as follows. Underlying the compensation of employees paid by government were the basic salaries and wages laid down in government salary scales. Once the basic salary or wage was established for an occupation, it was relatively straightforward to compute the government's compensation of employees because most of the other components of compensation of employees (such as housing or residence allowance, family allowance, special duty allowance, and so forth) were normally related to the salary scale by being defined as percentage additions to the basic salary or wage. To determine the compensation of employees for the selected occupations, countries first located the basic salary or wage for each selected occupation in the government salary scales. The procedure applied is described in table 15.4.

The compensation of employees reported for each selected occupation must be *annual*—not a particularly difficult requirement. Salary scales usually show annual amounts, and any revisions of the salary scales during the reference year are relatively straightforward to accommodate. When there are revisions, a weighted average is calculated, with the weights being the number of months when the old rate applied and the number of months at the higher rate.

TABLE 15.4 Determining the Basic Salary for a Selected Occupation Using a Salary Scale

national currency

Grade and category	Step						
	1	2	3	4	5	6	7
P4	88,900	91,400	93,900	96,400	98,900	101,400	103,900
P3	76,800	78,800	80,800	82,800	84,800	86,800	89,000
P2	66,100	67,900	69,700	71,500	73,300	75,100	76,900
P1	53,600	55,000	56,400	57,800	59,200	60,600	62,000
T4	47,900	49,500	51,100	52,700	54,300	55,900	57,500
T3	41,200	42,600	44,000	45,400	46,800	48,200	49,600
T2	35,500	36,700	37,900	39,100	40,300	41,500	42,700
T1	31,100	32,100	33,100	34,100	35,100	36,100	37,100
W4	34,700	35,700	36,700	36,800	36,900	37,000	37,100
W3	31,300	32,300	33,300	34,300	35,300	36,300	37,300
W2	28,400	29,200	30,000	30,800	31,600	32,400	33,200
W1	25,700	26,500	27,300	28,100	28,900	29,700	30,050

Source: ICP.

Note: About the salary scale:

- Employees in public administrations are usually paid on the basis of a salary scale similar to the one shown in the table. The scale is divided into *grades*: P, T, and W. Grades generally correspond to levels of education or skills. Within grades are *categories* (four in this example), and each category divided into *steps*: 1–7 in this example. Each step is usually composed of 12 months, although steps of 18 or 24 months are not uncommon.
- The personnel recruitment office will know the usual entry level for each occupation. Suppose, for example, the entry level is step 1 of category T2 for the ICP occupation 34, prison guard. The base pay for an entry-level prison guard will then be 35,500. For a prison guard with five years of seniority, the base pay will be 40,300 (equivalent to five steps). But if each step were 18 months or 24 months, five years of seniority would be equivalent to four steps and a salary of 39,100 for 18-month steps and to three steps and a salary of 37,900 for 24-month steps.
- The base pay obtained from the salary scales is converted to *compensation of employees* by adding in any cash allowances, income in kind, and employers' actual or imputed contributions relevant for a prison guard at this level of the pay scale.

The compensation of employees should also be the *national average*, taking into account the differences in compensation that may arise both between various levels of government—that is, between central, regional, state, and local governments—and within the same level of government—that is, between different ministries and departments of central government or between different regional governments, state governments, or local governments. Unless there are national salary scales, it will be difficult to obtain national averages because the information on the various salary scales that must be consulted may not be readily available. Even if it is available, there is still the question of how to combine them. In principle, some form of weighted average should be used.

One solution in the absence of national salary scales is to only use the salary scales of the central government. The validity of this approach depends on the extent to which the wages and salaries paid by the central government are representative of those paid by the general government. Some adjustments may be necessary to make them more representative, such as excluding the allowance paid to compensate for the higher costs associated with working in the capital city. But it is not a complete solution, because in some countries people in some occupations—such as teachers or doctors—are employed only by regional, state, or local governments and not by the central government. For the selected occupations that fall into this group, the need to refer to the salary scales of the appropriate level of government remains.

For international comparisons, the compensation of employees reported for the selected occupations must be adjusted for differences in the numbers of hours worked in different countries. In addition to compensation of employees, countries were therefore required to report in the 2005 ICP the number of hours regularly worked per week—excluding overtime—and the number of weeks worked per year. The latter was obtained by deducting annual leave and public holidays. In the 2005 ICP round, this information was supplied on the reporting form shown in table 15.5.

TABLE 15.5 Information to Be Reported for Compensation of Employees in Government, ICP 2005

Occupation code number	e.g., 106
Occupation description	e.g., Nurse
Annual compensation of employees <i>of which</i> :	
Gross wages and salaries	
Employers' actual contributions to social security funds	
Employers' imputed contributions to social security funds	
Income in kind	
Housing	
Food and meals	
Number of regular hours worked per week	
Number of days worked per week	
Number of days of annual leave per year	
Number of public holidays per year	
Year for which data are reported (2005 or nearest year available)	
Currency unit	

Source: ICP.

Reference PPPs

In the 2005 ICP, of the 26 basic headings for government (see table 15.2), prices were collected for six health goods and services and information on the compensation of three types of employees. No price data were collected for the remaining 17 basic headings. The PPPs for these basic headings were calculated from price data collected for other basic headings. These so-called reference PPPs are listed in table 15.6.

The choice of reference PPP is self-explanatory in most cases. For example, the reference PPPs for housing were the PPPs for actual rentals, and the reference PPPs for gross operating surplus—which, in practice is equal to consumption of fixed capital because net operating surplus is likely to be insignificant—were the PPPs for gross fixed capital formation.

When there was no obvious choice of a reference PPP, a *neutral average* was chosen instead. For example, the reference PPPs for intermediate consumption in collective services were the PPPs for individual consumption expenditures by households on the domestic market (excluding all basic headings with reference PPPs) and the reference PPPs for recreation and culture and for social protection were the PPPs for individual consumption expenditures by government (excluding social protection and recreation and culture, and before deducting receipts from sales).

A certain amount of duplication was associated with the derivation of some reference PPPs. For example, the reference PPPs for hospital services were the PPPs for the production of health services by government before deducting receipts from sales. These reference PPPs were therefore weighted averages of the PPPs for compensation of employees, intermediate consumption, gross operating surplus, and net taxes on production. Of these four items, only the PPPs for compensation of employees were based directly on price data. The PPPs for intermediate consumption, gross operating surplus, and net taxes on production were themselves reference PPPs.

Reporting Prices

Prices were required for six types of medical goods and services: pharmaceutical products, other medical goods, therapeutic appliances and equipment, and medical, dental, and paramedical outpatient services. However, no separate price collection was required for purchases by government. Prices for all six types of medical goods and services were collected for the relevant basic headings under individual household consumption expenditures. These same prices were used for the relevant government basic headings. For government, the only additional price collection was related to compensation of employees. Table 15.5 shows the information required for each of the selected occupations.

Validation of Prices

Before reporting compensation of employees on the form shown in table 15.5, participating countries had to look at the internal coherency of the data set. For example, doctors usually earn more than nurses; head teachers earn more than other teachers; officers in the armed forces earn more than privates, able seamen, and airmen; executive officials earn more than drivers; and drivers earn more than messengers. Income differentials between occupations that are contrary to expectations had to be verified and errors identified in this way had to be corrected.

TABLE 15.6 Reference PPPs for Government Services

Basic heading	Reference PPPs
INDIVIDUAL SERVICES	
Housing	
130111.1 Housing	PPPs for actual rentals
Health benefits and reimbursements	
130212.4 Hospital services	PPPs for production of health services by government (before deducting receipts from sales)
Production of health services	
130322.1 Intermediate consumption	PPPs for individual consumption expenditure by households on the domestic market (excluding all basic headings with reference PPPs)
130223.1 Gross operating surplus	PPPs for gross fixed capital formation
130224.1 Net taxes on production	PPPs for production of health services by government (without net taxes on production and before deducting receipts from sales)
130225.1 Receipts from sales	PPPs for production of health services by government (before deducting receipts from sales)
Recreation and culture	
130311.1 Recreation and culture	PPPs for individual consumption expenditure by government (excluding social protection and recreation and culture, and before deducting receipts from sales)
Education benefits and reimbursements	
130411.1 Education benefits and reimbursements	PPPs for production of education services by government (before deducting receipts from sales)
Production of education services	
130422.1 Intermediate consumption	PPPs for individual consumption expenditure by households on the domestic market (excluding all basic headings with reference PPPs)
130423.1 Gross operating surplus	PPPs for gross fixed capital formation
130424.1 Net taxes on production	PPPs for production of education services by government (without net taxes on production and before deducting receipts from sales)
130425.1 Receipts from sales	PPPs for production of education services by government (before deducting receipts from sales)
Social protection	
130511.1 Social protection	PPPs for individual consumption expenditure by government (excluding social protection and recreation and culture, and before deducting receipts from sales)
COLLECTIVE SERVICES	
140112.1 Intermediate consumption	PPPs for individual consumption expenditure by households on the domestic market (excluding all basic headings with reference PPPs)
140113.1 Gross operating surplus	PPPs for gross fixed capital formation
140114.1 Net taxes on production	PPPs for production of collective services by government (without net taxes on production and before deducting receipts from sales)
140115.1 Receipts from sales	PPPs for production of collective services by government (before deducting receipts from sales)

Source: ICP.

ICP 2011

This section explains the changes that will be made for the 2011 ICP round.

Extent of the Changes

Most of the procedures used for the 2005 ICP and described in the previous section will be retained for the 2011 ICP. In particular, the number and definitions of the basic headings for government will not be changed; the only special “price” information required for government refers to the compensation of employees. The prices of health goods and services collected for basic headings under household expenditure will continue to be used for the relevant basic headings under government expenditure. And government pay scales will be used to calculate employee compensation.

The changes planned for the 2011 ICP are as follows:

- The list of government occupations has been updated and reduced from 50 to 38 and is now aligned with the latest version of the International Standard Classification of Occupations (ISCO-08), issued by the ILO in 2010.²
- Countries will be asked to provide compensation for employees at four different stages of their careers: on first appointment and after 5, 10, and 20 years of experience in the same occupation.
- The types of income in kind included in compensation of employees have been expanded to cover, in addition to accommodation and clothing, free and subsidized transportation and other forms of income in kind.
- Countries will be asked to report the number of hours *actually worked*, in addition to the official hours, because in several countries in which government salaries are very low, it is the accepted practice that government employees may take time off to earn money in a secondary occupation.
- A new reporting form asks for information on government current and capital expenditures broken down by two levels of government: *central or federal* and all *other levels*.
- For government individual expenditures on education and health services, attempts will be made to find output measures to replace the input approach used in all earlier rounds of the ICP.

As for the last point, the use of output measures is experimental, and in the 2011 ICP the data on compensation of employees required for the input approach will still be required for health and education occupations. These experimental output measures are described in chapter 11 on health and education services and so are not explained here, but the other changes for the 2011 ICP are described in the rest of this section.

Revised List of Government Occupations

The list of government occupations for the 2011 ICP has been aligned with the 2008 version of the ISCO and now covers 38 occupations typical of government collective services and government health and education services (see table 15.7). It covers only civilian occupations because information sought in the 2005 ICP on military occupations was found to be unreliable and noncomparable.

TABLE 15.7 List of Occupations, ICP 2011

ICP code and job title	Description	ISCO-08 code and job title
1 Member of parliament	Members of parliament debate, make, ratify, amend, or repeal laws, public rules, and regulations. Members of parliament may be elected or appointed.	1111: Legislators
2 Senior government official	This senior government official is a permanent civil servant who is one level below a minister and may be described as "permanent secretary," "deputy minister," "director general," etc. This senior government official reports directly to the minister. These senior government officials may be working in any central or federal government ministry or department.	1112: Senior government officials
3 Hospital manager	Hospital managers formulate and review the policies and plan, direct, coordinate, and evaluate the overall activities of government-funded hospitals, clinics, and similar establishments.	1120: Managing directors and chief executives
4 Data processing manager	Data processing managers plan, direct, and coordinate the acquisition, development, maintenance, and use of computer and telecommunication systems.	1330: Information and communications technology service managers
5 Secondary school principal	Secondary school principals plan, direct, coordinate, and evaluate the educational and administrative aspects of secondary schools. "Principals" are also referred to as "head masters," "head mistresses," and "head teachers."	1345: Education managers
6 Government statistician	Government statisticians collect, edit, tabulate, and publish economic, demographic, and social statistics. Government statisticians will have a professional, tertiary-level qualification in statistics or in a related field such as mathematics or demography. In many statistical offices, there is a hierarchy of professional statistician grades such as assistant statistician, statistician, principal statistician, and senior statistician. Details of compensation should be provided for the grade that includes the largest number of statisticians.	2120: Mathematicians, actuaries, and statisticians
7 Hospital doctor	Medical doctors study, diagnose, treat, and prevent illness, disease, injury, and other physical and mental impairments in humans through the application of the principles and procedures of modern medicine.	2211: Generalist medical practitioners
8 Specialist doctor	Specialist doctors study, diagnose, treat, and prevent illness, disease, injury, and other physical and mental impairments in humans. They specialize in certain disease categories, types of patient, or methods of treatment, and may conduct medical education and research in their chosen areas of specialization. Examples of specialist doctors are pediatricians; dermatologists; gynecologists; orthopedic specialists; rheumatologists; cancer specialists; ear, nose, and throat specialists; cardiologists; gerontologists; ophthalmologists; and urologists.	2212: Specialist medical practitioners
9 Hospital nurse	Hospital nurses provide treatment, support, and care services for people who are in need of nursing care because of the effects of aging, injury, illness, or other physical or mental impairment, or potential risks to health. They carry out their tasks under the supervision of doctors or senior nurses. Hospital nurses will have had formal training of at least one year and will have a nationally recognized nursing qualification. The level and length of the training will depend on the standards applied in each country.	2221: Nursing professionals
10 University teacher	University and higher education teachers prepare and deliver lectures and conduct tutorials in one or more subjects within a prescribed course of study at a university or other higher education institution. They conduct research and prepare scholarly papers for publication in peer-reviewed journals.	2310: University and higher education teachers

TABLE 15.7 List of Occupations, ICP 2011 (*continued*)

ICP code and job title	Description	ISCO-08 code and job title
11 Vocational education teacher	Vocational education teachers teach or instruct vocational or occupational subjects in adult and further education institutions and to senior students in secondary schools and colleges. They prepare students for employment in specific occupations.	2320: Vocational education teachers
12 Primary school teacher	Primary school teachers teach a range of subjects at the primary education level.	2341: Primary education teachers
13 Secondary school teacher	Secondary education teachers teach one or more subjects at the secondary education level, excluding subjects intended to prepare students for employment in specific occupations.	2330: Secondary education teachers
14 Government accountants	Government accountants plan, organize, and administer accounting systems for government ministries, departments, and other agencies. They verify that the revenue and expenditure records maintained by government agencies are accurate and in compliance with current legislation. Government accountants will have a recognized qualification in accounting, which is usually acquired at a tertiary or post-tertiary education level.	2411: Accountants
15 Human resources professional	Human resources professionals work in "personnel" or "human resources" departments either in government ministries or in a department or ministry dedicated to recruitment and personnel management.	2423: Personnel and careers professionals
16 Database administrator	Database administrators develop, control, and maintain one or more databases in a government ministry or department.	2522: Systems administrators
17 Judge	Judges preside over civil and criminal proceedings in courts of law. The judge will have qualifications in the practice of law at the tertiary level or higher and will be entitled to try both civil and criminal cases.	2612: Judges
18 Government economist	Government economists conduct research, monitor data, analyze information, and prepare reports and plans to resolve economic and financial problems of government. The government economist for which compensation details are required should be working in a ministry of finance or ministry of economy.	2631: Economists
19 Laboratory assistant	Laboratory assistants perform technical tasks in hospital laboratories to help medical staff determine the causes of diseases and monitor the effectiveness of treatments.	3212: Medical and pathology laboratory technicians
20 Auxiliary nurse	Auxiliary nurses assist medical, nursing, and midwifery professionals in their duties. Nursing auxiliaries may or may not have a recognized medical qualification.	3221: Nursing associate professionals
21 Medical records clerk	Medical records clerks maintain the health records of patients. They are responsible for the storage and retrieval of these records in government medical facilities and other health care facilities	3252: Medical records and health information technicians
22 Office supervisors	Office supervisors supervise and coordinate the activities of clerical support workers.	3341: Office supervisors
23 Medical secretary (hospital)	Medical secretaries (hospital), using specialized knowledge of medical terminology and health care delivery procedures, assist health professionals and other workers by performing a variety of communication, documentation, administrative, and internal coordination functions.	3344: Medical secretaries
24 Customs inspector	Customs inspectors examine goods crossing international land, sea, or air borders to determine whether they are allowed to be imported or exported and to assess customs duties payable.	3351: Customs and border inspectors
25 Computer operator	Computer operators maintain networks and other data communications systems.	3513: Computer network and systems technicians

(continued)

TABLE 15.7 List of Occupations, ICP 2011 (*continued*)

ICP code and job title	Description	ISCO-08 code and job title
26 Secretaries (not medical)	Secretaries (not medical) use word-processing equipment to transcribe correspondence and other documents, check and format documents prepared by other staff, deal with incoming and outgoing mail, and screen requests for meetings with senior staff.	4120: Secretaries
27 Accounting and bookkeeping clerks	Accounting and bookkeeping clerks compute, classify, and record numerical data to keep financial records complete. They perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining records on receipts and expenditures.	4311: Accounting and bookkeeping clerks
28 Payroll clerks	Payroll clerks collect, verify, and process payroll information and compute pay and benefit entitlements for government employees working in one or more government ministries.	4313: Payroll clerks
29 Cooks	Cooks plan, organize, prepare, and cook meals in canteens and other eating places in schools, universities, hospitals, and government offices.	5120: Cooks
30 Building caretaker	Building caretakers take care of schools, hospitals, university buildings, and government offices, and maintain them and associated grounds in a clean and orderly condition. Other terms used for "building caretaker" are "conciierge" and "janitor."	5153: Building caretakers
31 Teachers' aides	Teachers' aides perform nonteaching duties to assist teaching staff, and provide care and supervision for children in schools and preschools.	5312: Teachers' aides
32 Firefighter	Firefighters respond to calls to extinguish fires and to deal with other civil emergencies.	5411: Firefighters
33 Policeman or policewoman	Policemen and policewomen maintain law and order and enforce laws and regulations. Work typically involves gaining familiarity with an area and the persons living in it, noting suspicious activities, patrolling assigned areas, rendering first aid, making investigations, maintaining logs of their activities, and giving evidence in legal proceedings. They generally work under the supervision of police inspectors or detectives. Examples of the occupations classified here include constable, patrolman/patrolwoman, police officer, river or harbor policeman/policewoman.	5412: Police officers
34 Prison guard	Prison guards watch over and maintain discipline among inmates of prisons, reformatories, or penitentiaries.	5413: Prison guards
35 Driver (general duty)	Drivers drive motor cars and vans to transport passengers, mail, or goods. They maintain their vehicles in a clean and roadworthy condition.	8322: Car, taxi, and van drivers
36 Office cleaners	Office cleaners perform various cleaning tasks in order to keep clean and tidy the interiors and fixtures of government offices.	9112: Cleaners and helpers in offices, hotels, and other establishments
37 Kitchen helpers	Kitchen helpers clear tables, clean kitchen areas, wash dishes, prepare ingredients, and perform other duties to assist workers who prepare or serve food and beverages. Kitchen helpers work in canteens and restaurants in schools, universities, hospitals, and government ministries and departments.	9412: Kitchen helpers
38 Messengers	Messengers carry and deliver messages, packages, and other items within an establishment or between establishments. They deliver messages either on foot or using vehicles such as bicycles and motor scooters.	9621: Messengers

Source: ICP.

Reporting Form for Compensation of Employees

The questionnaire for compensation of employees appears in table 15.8. A separate form will be completed for each of the four career points from entry level to 20 years of experience. The list of types of income in kind has been expanded to include transportation and other forms of income in kind. In addition, cash allowances for housing, food, meals, and so forth are now shown separately. In the 2005 reporting form (see table 15.5), these cash allowances were to be included in the basic salary but were not itemized separately. Another important change is that countries are asked to

TABLE 15.8 Questionnaire for Compensation of Employees, ICP 2011

Item no.	Information to be supplied on compensation of employees in selected occupations	Example
1	Year for which data are reported	2011 (yyyy)
2	ICP occupation code and name	9 Hospital nurse
3	ISCO code and name	2221 Nursing professionals
4	Currency unit	Hundred pesos/dollars/ thousand rupees ...
5	Level (tick) Entry level <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years <input type="checkbox"/> 20 years <input type="checkbox"/>	
6	Cash remuneration	
7	Base pay	40,000
8	Allowances and other additions to pay in cash:	
9	Housing	6,000
10	Transportation	3,000
11	Food and meals	1,000
12	Other allowances	2,000
13	Employers' social security contributions:	
14	Actual contributions	Not applicable
15	Imputed contributions	3,000
16	In-kind remuneration:	
17	Housing	3,000
18	Transportation	1,000
19	Food and meals	1,400
20	Other in-kind remuneration	1,000
21	Total remuneration	61,400
22	Number of regular (official) work-hours per week	36 hours
23	Number of actual hours worked per week	24 hours
24	Number of days of annual leave per year	20 days
25	Number of work-days per week	5 days
26	Number of public holidays per year	10 days

Source: ICP.

TABLE 15.9 Explanatory Notes to Table 15.8, Reporting Form for Compensation of Employees

Item no.	Explanatory note
5	Complete a separate questionnaire for each level of experience: entry level, 5 years, 10 years, and 20 years.
7	Base pay is the annual salary according to the government pay scale.
9–12	These are cash payments received by employees in addition to their base pay. "Other allowances" include housing allowances, electricity and water allowances, expatriation allowances, home leave allowances, bonus payments if these are made to all employees regardless of their performance, payments for travel to their home town for annual leave, "hard living" allowances for staff posted to distant or dangerous areas, and any other similar types of payments in cash.
14 and 15	In most countries, government employees are affiliated with some kind of social security scheme that provides retirement pensions, health insurance, and similar benefits. A government may make regular payments into a social security fund for its employees and thus enter the amount paid each year in line 14. In many countries, governments provide social security benefits to their employees but do not make payments into a social security fund. In this case, an "imputed" contribution is entered in line 15. It should be calculated in the same way as imputed social security contributions are calculated for national accounts.
17–20	In-kind remuneration is the value of goods and services provided to government employees free of charge. In some countries, school teachers and hospital staff are provided with free or subsidized accommodations. Raw foodstuffs and cooked meals may also be provided, as well as free or subsidized transport by bus or train. In-kind remuneration should be valued at the cost to the government of supplying these goods or services.
22	Report here the number of hours per week that the employee is expected to work according to government regulations.
23	In many countries, it is accepted practice that government employees work less than the regular (official) hours per week. They may have second jobs as teachers, accountants, or similar occupations. The best estimates of the hours per week actually worked by employees in this occupation should be reported here.

report hours actually worked when the hours are systematically less than the official hours. The explanatory notes are given in table 15.9.

Total Government Expenditures

Table 15.10 is the reporting form for total government expenditures. It covers both collective and individual government expenditures and gross fixed capital formation, as well as current outlays.

The changes planned for the 2011 ICP build on the experience of the 2005 ICP, which in turn built on the experience gained in earlier ICP rounds. Proper measurement of the services produced by governments is both important and difficult. It is important because in many countries governments are large and growing and the general public would like to know how efficiently their taxes are being used to provide collective and individual services. Measurement is difficult because there are no market prices to value government services, and so output usually has to be valued at the cost of the inputs used to produce them. If these costs go up, the output of government services goes up by the same amount, but there is no certain guarantee that this extra output is wanted by, or useful for, the taxpayers who finance it. It is for this reason that attempts will be made in the 2011 ICP to compare the real output of government health and education services in participating countries. Even if these attempts prove unsuccessful, the experience gained will be available for those who will design future rounds of the ICP.

TABLE 15.10 Questionnaire on Government Expenditures, ICP 2011

Item no.	Item	Level of government		
		General	Central or federal	Other levels
Enter amounts in national currency. Specify units _____				
1	Wages and salaries in cash			
2	Employer's contribution to social security funds			
3	Actual			
4	Imputed			
5	Benefits in kind			
6	Housing			
7	Transportation			
8	Food and meals			
9	Other in-kind benefits			
10	Intermediate consumption expenditure			
11	Other taxes less subsidies on production			
11	Consumption of fixed capital			
13	Net operating surplus			
14	Sales and fees (minus)			
15	Gross fixed capital formation			
16	Year 20 _____			

Source: ICP.

Note: Explanation of items:

General government includes all levels of government such as federal, central, provincial, state, municipal, and local government agencies. Report expenditures separately for the central or federal government and for all other levels of government combined.

Item 1. Wages and salaries in cash. This item covers all cash payments to government workers and includes overtime payments, performance bonuses, leave allowances, family allowances, cost of living allowances, and similar payments in addition to regular wages and salaries.

Item 2. Employer's contribution to social security funds. If the government contributes to a social security fund on behalf of its employees, enter the total amount of these contributions under item 3, "Actual." Many governments do not contribute to a fund, but nevertheless provide pensions and health and other benefits to their employees. In this case, the SNA requires countries to estimate what the contribution would have been if these benefits were being paid for out of a social security fund. In item 4, enter the estimate shown in the national accounts.

Item 5. Benefits in kind cover all benefits such as provision of free or subsidized food or meals, free or subsidized accommodations, free or subsidized transport, and so forth. All benefits in kind should be valued at the cost to government of providing them to its employees.

Item 10. Intermediate consumption expenditure consists of the goods and services purchased by government to provide health, education, defense, and all other services. This expenditure may include rent, electricity, office supplies, teaching materials, and medical goods. It excludes any of the goods and services included above as benefits in kind under item 5.

Item 11. Other taxes less subsidies on production. These include employment taxes and taxes on property. Governments rarely impose taxes on themselves, and this item will be zero in most countries.

Item 12. Consumption of fixed capital should be based on capital stock estimates valued at current market prices. In practice, not many countries have these estimates and can only report depreciation based on historic (or "acquisition") values.

Item 13. Net operating surplus. "Net" means that the operating surplus is calculated after deducting consumption of fixed capital. It is very rare that government agencies have a net operating surplus, but it can happen that local authorities may earn a net operating surplus from a local bus or tram service, for example. For most countries, this item will be zero.

Item 14. Sales and fees are "negative" consumption and have to be deducted. They may include items such as museum entrance charges, passport fees, and licenses to own pets or firearms.

Item 15. Gross fixed capital formation by government consists mainly of expenditures on plant and machinery, buildings, roads, bridges, and other structures. Expenditures on mineral exploration, development of orchards, timber tracts, land improvement, and computer software and databases are also included.

Item 16. Data should be supplied for the most recent year for which final estimates of government expenditures are available.

NOTES

1. See Commission of the European Communities et al. (1993). The detailed definition of *government* is given in paragraphs 4.101–4.131.
2. See <http://www.ilo.org/public/english/bureau/stat/isco/index.htm>.

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