

# Household Consumption: Approach and Data Requirements

This chapter describes the price survey of the International Comparison Program (ICP) for household consumption products (the survey forms appear in annex A). It was designed to serve as a practical guideline for economies carrying out the main price survey in accordance with the established methods and procedures for the 2011 round of the ICP. This chapter covers the development and use of the ICP's global core list, the suggested process for developing the ICP 2011 regional lists, the overall survey framework, the outlet definitions and price types, the definitions of availability and importance, and the distinction between homogeneous and heterogeneous basic headings (BHs).

## DEVELOPMENT OF THE ICP 2011 GLOBAL CORE LIST

A significant improvement over ICP 2005 was the development of a set of global core products that became embedded in the list of products specific to each region. During the 2011 round of the ICP, a global core list of 618 products was priced for the household consumption survey. It was developed through a participatory and iterative process, which makes it a truly global list in the sense that it reflects comments and proposals provided by the regional and national coordinating agencies from all

ICP regions as well as Eurostat, the statistical arm of the European Commission, and the Organisation for Economic Co-operation and Development (OECD).

The ICP 2011 global core list grew out of the ICP 2005 Ring list that was used to link the regions and the Eurostat-OECD purchasing power parities (PPPs) to the global results. In the interim period prior to ICP 2011, the ICP Global Office prepared a subset that approximately reproduced the 2005 results using a reduced list of 350 items distributed across all household consumption basic headings. Matrixes of products and economies such as the average prices of products, quotes to be collected, and diagnostics of the country product dummy (CPD) residuals fed into the decision of which products to include in the global core list.<sup>1</sup> Tables also included coefficients of variation of CPD residuals by economy and by product, indicating the coherency of prices across economies and products. A combinatorial approach was then used to single out products. A very important consideration in the selection process was providing sufficient overlap for computing CPD-based PPPs. This model-based list was amended by a review group that added 30 essential items automatically discarded in the reduction process. The amended list was discussed with the regional coordinating agencies in three workshops, ending with 601 items in October 2010. In the summer of 2011, 17 items

related to fast-evolving technology and passenger transport by air were added to complete the process, bringing the total to 618 products.

The preparation of the structured product descriptions (SPDs) of the 2011 global core list of items (see next section) was completed about three months before household consumption surveys were begun in the ICP regions in January 2011. The main list of items was designed to cover prices for representative goods and services purchased by households in the ICP regions for their personal consumption during the year of the survey operation, which was 2011 for most regions and 2012 for the Caribbean and Pacific Islands.

## PROCESS FOR DEVELOPING THE ICP 2011 REGIONAL LISTS

The process for developing the ICP 2011 regional lists consisted of a number of steps, including revising the ICP 2005 regional list and making amendments and revisions to products or removing obsolete products entirely and adding newly relevant ones. To improve the process for selecting comparable products across economies for ICP 2005, the Global Office designed a system—structured product descriptions—for specifying the goods and services to be priced. The detailed process for developing the ICP 2011 regional lists appears in box 4.1.

### BOX 4.1

#### Process for Developing the ICP 2011 Regional Lists

*Step 1. Start with the ICP 2005 regional list and the ICP 2011 global core list.*

It was recommended that regions refer to their ICP 2005 regional list and the ICP 2011 global core list when developing their ICP 2011 regional list. To complete the first step, both lists had to be available in a structured product description format.

*Step 2. Create a first draft of the 2011 regional list:*

- Identify the 2005 products to be deleted. Such products may be described as obsolete, problematic, or imprecisely specified.
- Identify the 2005 products to be updated or amended. The relevant product specifications must be added.
- Include any new products needed as well as the products' full specifications.

*Step 3. Compare the first draft of the regional list with the ICP 2011 global core list:*

- Identify perfect matches (in terms of characteristics) of products found in both lists. These products are added to the draft regional list without repetition.
- Identify comparable products and retain their relevant product characteristics from

the global core list. Supplement them with regional specificities.

- Identify exclusive products in the amended regional list.
- Identify exclusive products in the global core list.

*Step 4. Consolidate the ICP 2011 regional list.*

- Combine products under step 3 without repetition.
- For each basic heading, align characteristics of all products to the global core list SPDs. Regions may add characteristics to the basic heading SPDs.

*Step 5. Prepare the matrix of availability and importance (more information on the concept of availability and importance appears later in this chapter):*

- Ensure that all economies indicate each product's availability.
- Consolidate all economy input into a single matrix.

*Step 6. Flag the global core list products, the regional core products, as well as the subregional specific products in the 2011 regional list.*

*Step 7. Submit the final matrix of availability and importance to the Global Office.*

Successful implementation of the process described in box 4.1 may have required holding regional workshops to assist regions in conducting each of the steps correctly. In addition, continual communication between the regional coordinating agencies and the Global Office was expected throughout the process of developing the regional product lists.

## OVERALL SURVEY FRAMEWORK

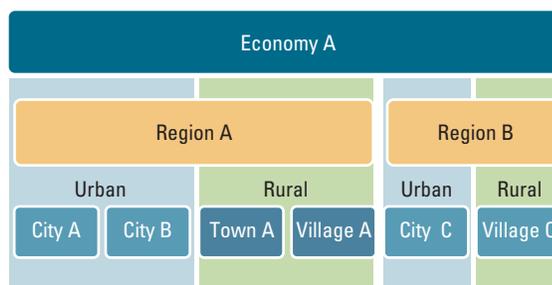
Three sampling aspects of the main price survey require special consideration during implementation of the price survey on household consumption products.<sup>2</sup> The first aspect incorporates the spatial components of the survey design, properly stratifying an economy to ensure that all geographical locations are represented. For the second, economies need to select the individual outlets within those geographical locations where data collection will occur. The third aspect is selection of the individual products to price.

### Spatial Framework: Geographical Stratification

The primary objective of the ICP is to measure price levels across economies. To meet this objective, it is imperative that the national average prices covering expenditures in all economic territories of an economy are obtained for the calculation of purchasing power parities. Thus all economic areas of an economy must be represented in the exercise because urban and rural territories often exhibit distinct pricing patterns, resulting in price levels that diverge considerably. Even though these trends may reflect similar changes in prices over time, different price levels can still be observed. The spatial aspects of the survey framework ensure that the ICP accurately captures national average prices, therefore ultimately accomplishing its primary objective of measuring price levels.

ICP 2011 covered nearly 200 economies that, across regions, exhibit very different and unique economic and pricing structures. A crucial component of the spatial framework is to properly stratify an economy into regions,

**Table 4.1** Stratification of an Economy, ICP 2011



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

provinces, and states in order to obtain the needed price information. Table 4.1 illustrates how economy A can be split into two regions (A and B), and then further divided into urban and rural areas. The last row shows how the individual cities and towns in which the data are collected are identified within the selected urban and rural areas. This process provides a practical method for considering all the relevant cities and towns across the various economic territories of an economy and therefore ensures that the collected prices are indeed the national average prices required for the ICP.

### Selection of Individual Outlets

The second aspect of the survey framework entails identifying the relevant outlet categories. Nine different types of outlets have been identified for ICP purposes, including large shops (supermarkets, hypermarkets, department stores) and medium-size and small shops (mini-markets, kiosks, neighborhood shops, grocery stores, convenience stores), or other. Once the categories are identified, economies can proceed to select the appropriate type and number of outlets in each of the defined categories (see World Bank 2013, chap. 7).

The process of selecting outlets should take into account the diverse types of outlets and their relative shares of overall expenditure. Some important considerations for the selection of outlets include:

- Volume of their sales
- Variability of their prices (within and between outlet types)

**Table 4.2** Stratification of Outlets, ICP 2011

City/town/village														
Shopping district A									Shopping district B					
Outlet type A			Outlet type B			Outlet type C			Outlet type A			Outlet type B		
Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet

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

- Their location (taking into account rural and urban areas)
- Number of outlets per outlet type.

Table 4.2 is a visual depiction of how the various shopping districts within a particular city could be determined and how the different outlet types could be selected. The last row of the table represents the individual outlets in which data will be collected.

The advantage of selecting outlets by type, location, and volume of sales is that the approach provides a self-weighting sample, thereby making the process of estimating national average prices much more straightforward.

The selection of individual outlets is especially important because different products have different distribution profiles. Prices for the same product can vary between outlet types because of the various circumstances such as the services provided. For these reasons, the selection of outlets should take into account the different types of outlets and their relative share of the overall expenditures. Table 4.3 on outlet types and definitions provides guidelines to the selection process. This process usually requires expert judgment because of the lack of a sample frame with expenditures by outlet or outlet type (World Bank 2013, chap. 7).

During the price collection process, economies had to ensure differentiation among the different price types. In ICP 2011, there were three main types of prices: (1) R, the regular price; (2) S, the sale price; and (3) B, the bargained price. A distinction among these prices had to be made and clearly noted during price collection. If a particular product was available at a sale or bargained price, the price type was to be clearly indicated in the survey forms in addition to the monetary price.

### Selection of Products to Be Priced

The third aspect of the overall survey framework is selection of the products to be priced. In ICP 2011, economies were required to select at least one product from the global core list and at least three products from the regional list for each basic heading. Basic headings were the most detailed level of expenditures for which economies were asked to supply expenditure shares. Economies were therefore not expected to classify goods and services according to their known expenditure shares. Instead, economies were asked to indicate whether, if expenditure shares were available at the product level, the shares for each product were large or small within the basic heading. This information is useful in determining whether a product is important or less important. For example, if expenditure shares are known and are expected to be large for a particular product, this product can be classified as important. Similarly, if expenditure shares are small, the product can be classified as less important. The importance of basic headings is measured by their expenditure shares of consumption. The basic heading PPPs with larger expenditure shares receive additional attention because they receive more weight in the aggregation process.

It is critically important to remember that the reliability of PPPs at the basic heading level, as well as at higher levels of aggregation, depends on the accuracy and comparability of collected prices. Certain guidelines have to be strictly followed during the selection process because several factors can directly affect the quality of the final PPPs. First, the levels of detail associated with specifying price-determining characteristics can play a key role in ensuring that comparable products are priced—for example, differentiating among long grain rice, parboiled

**Table 4.3** Outlet Types and Definitions, ICP 2011

Code and type	Examples	Definition
1. Large shops	Hypermarkets, supermarkets, department stores	<i>Hypermarket:</i> An especially large superstore that is a combination of a supermarket and a department store. It is essentially a very large retail facility that carries a vast range of products under the same roof, including groceries, clothing, hardware, and electrical products. Hypermarkets enable customers to satisfy all their regular everyday shopping needs all at once.
		<i>Supermarket:</i> Essentially a self-service grocery store that offers a vast variety of food and household products. It is generally larger than a traditional grocery store and smaller than a hypermarket. Products normally found at a supermarket are meat, dairy, fresh produce, and baked goods. Supermarkets organized in departments also carry canned and packaged goods as well as nonfood products. In addition, one can find cleaning supplies, alcohol (if legal), and pharmaceutical products. Some supermarkets carry a larger variety of nonfood products than others.
		<i>Department store:</i> A retail outlet type that offers a wide range of consumer personal and residential durable goods. It carries a variety of merchandise lines at variable price points covering all product categories. Department stores offer apparel, home appliances and furniture, electronics, cosmetics, toys, jewelry, and sporting goods. They tend to be part of a regional, national, or international retail chain with a large number of stores.
2. Medium-size and small shops	Mini-markets, kiosks, neighborhood shops, grocery stores, convenience stores	<i>Mini-market:</i> A market with few shops in it. Although smaller than a normal-size market, it offers a convenient method for shopping because it provides a certain degree of variety all at one place.
		<i>Kiosk:</i> A booth located on the street in which vendors sell small and inexpensive consumer products such as newspapers, cigarettes, gum, and candy through a window opening on one side of the kiosk.
		<i>Neighborhood shop:</i> A retail shop that blends in with the surrounding neighborhood and focuses on local tastes and needs.
		<i>Grocery store:</i> A store that sells mainly food. The owner of the shop is in charge of stocking the outlet with various kinds of food from a number of places.
3. Markets	Open markets, covered markets, wet markets	<i>Convenience store:</i> A centrally located small store that offers a limited variety of goods. Convenience stores are usually open longer hours and can charge higher than average prices than the high-volume retail outlets such as supermarkets.
		<i>Open market:</i> A market in which transactions occur with no restrictions on price.
		<i>Covered market:</i> A market covered by a structure such as a tent.
4. Street outlets	Mobile shops, street vendors	<i>Wet market:</i> An open food market. The floors and settings are regularly sprayed and washed with water—to the point of flooding it at recurrent intervals—which leads to the term <i>wet market</i> .
		<i>Mobile shop:</i> A registered vehicle from which individuals display and sell merchandise or food. Mobile shops were previously known as "hawkers." This category does not include the consumption of food in or at the vehicle.
		<i>Street vendor:</i> A person who sells his or her wares in the open air rather than in a formal retail setting. Vendors either have stands or use carts that can be taken away at the end of the day. Occasionally referred to as a peddler, the street vendor is normally found in metropolitan areas, at outdoor events, and sometimes at public beaches. A street vendor or hawker is a vendor of goods that can be transported with no trouble.
		<i>Street vendor:</i> A person who offers goods or services for sale at mobile stalls or temporary static structures. Street vendors may be stationary by occupying space on the sidewalks or other public or private areas, or they may be mobile, moving from place to place carrying their wares on pushcarts or on bicycles or baskets on their heads. Or they may sell their goods on a moving bus.

table continues next page

**Table 4.3** Outlet Types and Definitions, ICP 2011 (*Continued*)

Code and type	Examples	Definition
5. Bulk and discount shops	Wholesale stores, discount shops	<i>Wholesale store:</i> A dealer-managed store in which goods are sold directly to the consumer, avoiding retailers. Prices are generally lower than those found at normal retailers. <i>Discount shop:</i> A store in which goods—especially consumer goods—are offered at discounted prices from suggested manufacturers' prices.
6. Specialized shops	Supply shops, hardware shops, furniture shops	<i>Supply shop:</i> A store in which tools and materials are sold such as the materials needed for building construction. <i>Hardware shop:</i> A so-called do-it-yourself (DIY) store that offers a variety of household hardware, including fasteners, hand tools, power tools, keys, locks, hinges, chains, plumbing supplies, electrical supplies, cleaning products, utensils, paint, and lawn and garden products. These products are sold directly to consumers for home or business use. Depending on the region, hardware shops may offer specialties tailored to local interests.
7. Private service providers	n.a.	Taxicabs, hotels, restaurants, private schools, private hospitals, etc.
8. Public or semi-public service providers	n.a.	Water suppliers, electric power companies, public schools, public hospitals, etc.
9. Other kinds of trade	Online (Internet) shopping sites, catalog orders	<i>Online (Internet) shopping site:</i> Essentially an online store—also called an e-shop, e-store, Internet shop, web shop, web store, online store, or virtual store—that allows consumers to obtain the same products they normally purchase at a physical retailer such as a shopping center. <i>(Mail) catalog orders:</i> The process of buying products or services by mail delivery. Consumers can place an order with the merchant for the desired product over the telephone. Products are delivered directly to the buyer at the address provided at the time of purchase. Goods can also be shipped for pick-up to a nearby, prespecified location. Some merchants also allow goods to be shipped directly to a third-party customer, which is an efficient and quite popular way to send a gift to a recipient living in a different location.

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

Note: n.a. = not applicable.

rice, and packaged rice. Second, the number of products to be priced in each basic heading depends importantly on the heterogeneity of the basic heading, the degree of overlap of products across economies, and the overlap of products each economy identifies as important to its economy. And, third, the sample design for the price survey itself, which provides the number and types of outlets to be included, should be carefully thought out.

When selecting the specific products to price within each basic heading, economies were asked to take into account the notion of importance. For the ICP 2011 round, economies were asked to classify all goods and services in the household final consumption expenditure that were available as either "important" or "less important" in

order to accurately identify the expenditure shares of products in the basic heading.

The importance of products is taken into account not only during the compilation of the regional product lists, but also during the price validation process because products identified as important by an economy will be given more weight in calculating their PPPs. Therefore, economies had to ensure that important products for each basic heading were properly included in both the core and regional lists. The concept of importance does not encourage economies to ignore products classified as less important. After all, those products will provide links with other economies where the product in question, despite being less important, is available. If a good or service is not available in a particular

economy, the notion of important or less important is not applicable to that good or service.

An important product is one that has a large expenditure share within the basic heading to which it belongs. Such a product may have a very small expenditure share within the household consumption sector as a whole, but may still be important within its basic heading. For example, in many economies, few people buy wine, but that does not mean that all the products specified within the wine basic heading are less important. In that heading, one or two types of wine may be best-sellers, and the wine merchant can almost certainly identify them. These particular wines are important within the basic heading even though their expenditure share of total household consumption may be negligible.

For ICP 2011, economies in regions other than the Eurostat-OECD and Commonwealth of Independent States (CIS) regions classified all goods and services in the household final consumption expenditure (HFCE) that were "available" as either "important" or "less important."<sup>2</sup> If a good or a service was "not available" in the economy, the notion of important/less important was not applicable to that good or service. Importance is defined by reference to the expenditure share of the product within a basic heading. However, defining importance by reference to expenditure shares raises an obvious problem in that economies are never asked to provide expenditure weights below the basic heading level. The basic headings are in fact defined as the most detailed level of expenditure for which economies can reasonably be asked to supply expenditure shares. Therefore, economies cannot be expected to classify goods and services according to their known expenditure shares. Economies were required to provide information on whether the expenditure shares for each product would be large or small within the basic heading because expenditure shares are available at the product level.

Economies were also asked to provide prices for all products they identified as "important." They were required as well to price products they classified as "less important" in order to provide links with other economies. As a rule, each economy had to provide prices for at least one product per basic heading and declare at least

one product to be important under each basic heading. It is essential to consider the importance of products for a certain basic heading in relation to the product list by asking which of the products *included* in the list are the most typical.

The following three approaches can help determine whether a product is important or less important:

1. *Consider the consumer price index (CPI).* Economies can start by asking whether the product is in their national CPI. If an item is the same as or very similar to one in the consumer or retail price index, the economy should always classify it as important. Nevertheless, products in the ICP lists but not in the CPI may still be important.
2. *Use expert judgment or common knowledge.* Economies can use expert judgment or common knowledge in determining importance. Statisticians can call on their own knowledge of what are widely available and commonly purchased products within the basic heading context. For example, the basic heading for cheese typically includes a number of products for different types of cheese. It may be known that cheddar cheese is sold in almost all food shops, but that Brie is available only in specialty shops. Cheddar, then, is important, and Brie is less important. However, in another economy the situation might be the opposite. Both products should thus be priced in order to provide a sufficient number of links with other economies.
3. *Ask an expert.* Another approach to establishing importance involves asking experts, most of whom tend to be shopkeepers. The success of their businesses depends on knowing which products are best-sellers and which are bought less often. For example, the basic heading rice normally contains products for different types of rice, but also products referring to different quantities such as a package of 1 kilogram or 15 kilograms of white rice. In economies in which rice is not typically consumed in large quantities, for example, the shopkeeper may say that the smaller package is sold more often than the larger package. The situation might be the opposite in economies where rice is consumed in large quantities.

When selecting individual products to price, economies must recognize that some basic headings are considerably more heterogeneous than others—in other words, some basic headings contain products that serve a variety of purposes. For example, the garment basic heading includes clothing for men, women, and children. Because of the unique nature of such basic headings, they must be split into homogeneous subgroups (men, women, and children) before assigning importance to each of the individual products.

Because several basic headings are rather heterogeneous, containing a range of products that serve different purposes, splitting them into homogeneous subgroups before deciding on importance is a critical part of the process. For example, the basic heading for newspapers contains books and stationery, which are rather heterogeneous because they serve different purposes. They should therefore be split into newspapers, books, and stationery before assigning importance to particular products. Garments is another heterogeneous basic heading because it includes clothing for men, women, and children. It should be split into these three components before assigning importance.

Many of the heterogeneous basic headings are combinations of the more homogeneous basic headings in the Eurostat-OECD classification on which the ICP Expenditure Classification is based. The ICP Classification shows which of these more homogeneous basic headings have been combined. It is recommended that economies use the table in annex B as a starting point for splitting up heterogeneous basic headings before allocating products to the "important" and "less important" categories. In addition, the actual household consumption product list, culture, and other factors should be taken into account.

## SOURCES OF VARIABILITY IN ESTIMATING PPPs

So far, this chapter has covered the process of developing the ICP 2011 regional lists by providing a general idea of the overall survey framework outline as well as aspects related to both the spatial aspect of the survey and the

issues to be considered when selecting individual products to price. This section presents some of the natural sources of variability in the estimation of PPPs, along with solutions on how to address them.

Table 4.4 is based on data from the 2005 Ring survey for the rice basic heading for six economies. The Ring survey was based on a global set of products priced by a subset of economies in each region; the purpose was to compute interregional PPPs. The basic heading PPPs for each economy were used to convert the national price for each product into the currency of the base economy, effectively becoming a PPP price. The geometric mean of the PPP prices for each product became its international price. In the table, in economy B the deviation of the PPP price for brown rice from the international price for brown rice is 0.80. The variation in the PPP product prices in economy B ranges from 1.32 to 0.80. The table indicates that medium grain rice in economy B is relatively expensive compared with brown rice. The relative standard deviation of the residuals in economy B is 0.17. In economies E and F, the variabilities shown by the standard deviations are both around 0.30. The standard deviations, as well as the number of products within the basic heading and the number each economy priced, provide guidelines for the survey framework. The economies were not able to price every product; the number of products priced is a determining factor in the estimates of the sampling error (World Bank 2013, chap. 7).

Two of the six economies priced only two products, and another two priced only three products. This finding implies that either more products should have been included, or that the product descriptions should be reviewed to make them more comparable across economies.

Medium grain rice was priced only by three economies, but shows extreme variability—the ratios of the PPP prices to the international prices range from 0.22 to 1.45 and contribute considerably to the relative sampling errors in the economies pricing this kind of rice. This finding suggests that the product description be reviewed with each economy to determine whether all economies are pricing the same product. Economies A and C, especially, should be queried to determine whether they

**Table 4.4** Variability of PPP Prices by Product and Relative Sampling Error, ICP 2005

	Country product dummy (CPD) residuals					
	Economy A	Economy B	Economy C	Economy D	Economy E	Economy F
<i>Rice (basic heading)</i>						
Long grain, prepacked	0.95			1.31	0.66	0.69
Long grain, loose		0.88		1.00		
Basmati		1.02		1.34	1.16	
Medium grain		1.32		0.22		1.45
Short grain	1.05	1.05	1.27	0.39		
Brown		0.80	0.55	1.22	1.31	1.00
Basic heading PPP	1.795	853.1	1,047.0	4.801	19.98	319.6
Standard deviation of residuals	0.05	0.172	0.236	0.285	0.298	0.303
Relative sampling error	0.035	0.077	0.169	0.117	0.172	0.175
90 percent confidence interval	±0.058	±0.128	±0.282	±0.195	±0.288	±0.292

Source: World Bank 2013, chap. 7.

Note: PPP = purchasing power parity. CPD residuals: the ratio of each product price converted to the currency of the base economy (PPP price) to the geometric mean of the PPP prices across economies for each product. The geometric mean is the international price of each product. *Standard deviation of residuals*: expressed as a ratio, an estimate of the variability of the relative product prices in each economy. *Relative sampling error*: standard deviation divided by the square root of the number of products priced.

**Table 4.5** Sample Sizes by Target Precision and Relative Standard Deviation, with 10 Percent Significance Level, ICP 2005

	Estimated relative standard deviation: s/m				
	0.05	0.1	0.2	0.3	0.4
Target precision (%)	Number of products or number of price observations				
	3	10	45	100	176
0	1	3	10	25	100
5		1	5	10	20

Source: World Bank 2013.

priced only products important to their own economies rather than all available and comparable products.

Even though the sample of products is not from a random selection, the principles of sampling theory can be used in deciding on the number of products to price. Table 4.5 shows the suggested sample sizes by the desired precision given the standard deviations of the relative prices in the basic headings. The goal is to price enough products so that the sampling error of the basic heading PPP based on the product PPPs falls within the predefined limits of precision. The standard deviation of the residuals for each

economy can be used as a measure of the variability stemming from the differences in product PPPs. If one assumes random sampling, inferences can be made about the precision of the estimated basic heading PPP for each economy using the relative sampling error. The relative sampling error is a function of the variability of the relative product prices and the number of products priced—that is, the standard deviation divided by the square root of the number of products priced. Although in table 4.4 the standard deviation for economy D was only slightly less than that for economy E, economy D priced twice as many products, resulting in a sampling

error for its PPP of 11.7 percent, compared with over 17.0 percent for economy E. The estimated PPP for economy D was thus more precise (World Bank 2013, chap. 7).

The relative sampling error can be used to make probability statements about the accuracy of the estimates of the basic heading PPPs. The last row in table 4.4 shows the confidence interval or the range within which the basic heading PPP should fall 90 percent of the time if the sampling process were repeated. The confidence interval ranges from 0.058 for economy A to 0.292 for economy F. The value for economy F implies that the PPP for the rice basic heading could vary as much as  $\pm 30$  percent with repeated sampling. If economy F had priced all of the products resulting in the same standard deviation, the confidence interval would have fallen to  $\pm 20$  percent. Instead, just three products were priced. Only economy D priced all six products, but because of the variability of the relative prices, it has a PPP with about a 20 percent confidence band (World Bank 2013, chap. 7).

The greater the population variance, the lower is the level of precision in the estimated mean for any given sample size. Conversely, the larger the size of the sample, the greater is the level of precision in the estimated mean achieved for any given variance in the population. The size of the sample needed to achieve a given level of precision, say 5 percent, may increase sharply with the relative standard deviation—for example, when  $s/m$  increases from 0.2–0.3, the minimum sample size needed more than doubles, from 45 to 100.

Table 4.6 is based on sampling theory and shows the relationships between the number of products, the relative standard deviations, and the target levels of precision. These relationships were used to evaluate the number of products priced for the Ring price survey for several basic headings using the data in table 4.6. This evaluation could also be used as a guideline for the number of products to be priced in the ICP 2011 round.

The fresh or chilled fruit basic heading contains 12 products, and economies priced between 6 and 11 of them. Although the standard deviations of the residual ratios are as large as they are for rice, the sampling errors are

markedly fewer because more products were priced. The garment basic heading contains 68 products with large standard deviations. However, the sampling errors are small because of the large numbers priced by each economy. This basic heading is very heterogeneous because it includes clothing for men, women, and children; it also has a relatively large share of the expenditures. Therefore, it is important that the PPPs be as precise as possible. Several reasons account for the sampling variability in the electricity basic heading. For one thing, only five products are included and all economies priced them, except for one economy that priced three. In addition, all products have relative, homogeneous prices. Similar patterns can be observed for products such as milk and eggs, implying that a small number of products should be selected for those basic headings. The pharmaceutical products basic heading contains 43 products, but the economies priced only 8–19 of them. Because of these sample sizes and the variability in the relative prices, the sampling variability could be considered logical. In view of the importance of the basic heading and the difficulty encountered by the economies in pricing all products, the large number of products is warranted, but the specifications should be reviewed (World Bank 2013, chap. 7).

Table 4.7 illustrates the ranges of the basic heading standard deviations across economies for rice and the four other basic headings shown in table 4.6, as well as the suggested number of products to be priced as compared with the number included in the 2005 Ring survey. The target sample sizes are presented in ranges, using the guidelines in table 4.6. The larger figure should be used when the basic heading exhibits above-average expenditure shares.

The relative price levels for rice are more variable than those for other products across economies, ranging from 0.05 to 0.30. This finding suggests that more than 10 products be priced, unless the economy or region is willing to accept a 15 percent level of precision rather than 10 percent. Because electricity is usually furnished by a very small number of providers, there is very little variability in the rates, as evidenced by the relative standard deviations, ranging from 0.03 to 0.17 across economies

**Table 4.6** Basic Heading PPPs, Relative Standard Deviations of Basic Heading PPPs, Number of Products Priced, Relative Standard Deviations of Product PPPs, and Sampling Errors, ICP 2005

	Economy					
	A	B	C	D	E	F
Aggregated basic heading PPPs	2.933	634.5	676.9	4.052	285.6	7.879
Relative standard deviation of basic heading PPPs	0.245	0.234	0.2856	0.2981	0.298	0.303
Basic heading						
Rice (6 products)						
PPP	1.794	853.146	1046.6	4.801	19.975	319.551
Number of products priced	2	5	2	6	3	3
Relative standard deviation	0.050	0.172	0.236	0.285	0.298	0.303
Relative sampling error	0.035	0.077	0.169	0.117	0.172	0.175
Fresh or chilled fruit (12 products)						
PPP	1.770	384.203	327.819	1.900	15.649	276.714
Number of products priced	7	6	11	9	11	9
Relative standard deviation	0.374	0.252	0.194	0.32	0.188	0.202306
Relative sampling error	0.141	0.103	0.058	0.109	0.057	0.067
Garments (68 products)						
PPP	2.863	689.751	925.769	4.898	22.222	393.127
Number of products priced	38	46	47	58	54	41
Relative standard deviation	0.252	0.261	0.243	0.300	0.243	0.239
Relative sampling error	0.041	0.039	0.035	0.039	0.033	0.037
Electricity (5 products)						
PPP	5.674	853.378	828.622	1.2855	14.729	349.603
Number of products priced	5	5	5	5	5	3
Relative standard deviation	0.039	0.039	0.039	0.169	0.094	0.081
Relative sampling error	0.018	0.018	0.017	0.076	0.042	0.081
Pharmaceuticals (43 products)						
PPP	4.398	955.445	1212.91	7.88	18.289	310.953
Number of products priced	12	19	8	12	13	12
Relative standard deviation	0.384	0.268	0.271	0.262	0.277	0.329
Relative sampling error	0.111	0.062	0.096	0.076	0.077	0.095

Source: World Bank 2013, chap. 7.

Note: PPP = purchasing power parity.

**Table 4.7** Examples of Target Numbers of Products to Price, ICP 2005

Product	Standard deviation of relative prices	Target number of products to price	Number in 2005 Ring survey
Rice	0.05–0.30	10–15	6
Fresh or chilled fruit	0.19–0.37	10–15	12
Garments	0.24–0.30	70–100	68
Electricity	0.03–0.17	3–5	5
Pharmaceuticals	0.26–0.38	50+	43

Source: World Bank 2013.

(the 0.17 deviation suggests an additional review of economy D's prices). With these small deviations, an economy may need to price only three to five products to be 90 percent confident that the resulting PPP is within 5 percent of the target. As noted, products such as milk and eggs also exhibit very little price variability (World Bank 2013).

When economies decide on the number of products to price, it is essential that they consider the relative importance of the basic heading itself. If it constitutes an important part of the consumption basket, economies have to target the number of products needed to obtain measures of the relative prices that will result in a 5–10 percent level of precision. However, if the basic heading has a very small weight, then the target level of precision could be increased to 10–15 percent so that resources can be directed toward the more important basic headings. The garment basic heading requires a large number of products as it is both heterogeneous and accounts for a significant part of household consumption expenditures (World Bank 2013, chap. 7).

Because not every economy is capable of pricing every product, the target number of products is increased so that each economy can price the minimum number. As the number of overlapping products across economies decreases, more products will be defined so that each economy can submit prices for a minimum number. The number of products priced should be comparable across economies. Because expenditure weights are not available for individual products, the only weighting is provided by the importance classification and the number of products each economy prices (World Bank 2013, chap. 7).

## TIME FRAME

When decisions on where to collect data and what products to price are finalized, economies establish the appropriate frequency of data collection.

The goal of the ICP is to calculate the annual average national price for each product. Therefore, the prices for most products must be collected several times during a one-year survey reference period. Although the standard approach is to measure prices quarterly, it is often true that decisions on the frequency of surveys are made on a case-by-case basis, depending on the product in question. Nevertheless, for most of the economies the survey period was the year 2011.

Economies consider several factors when designing the survey time frame. First, the frequency with which prices need to be collected depends on the extent to which they vary over time. Apart from strongly seasonal products, quarterly price collections are generally considered frequent enough for ICP purposes when the annual percentage rate of general inflation is low or moderate—for example, a single-digit rate.

Second, it is essential to differentiate between the timing and frequency of price collection because timing refers to the point, or points, in time within the month or quarter in question when the prices are actually collected.

Third, the scheduling of price collection dates, including times of day, must be set in advance, taking into account various elements such as the price variations during the day, week, month, or quarter; the relative volume of sales at these different price levels (estimated); possible quality changes in goods at different times; and fashion and other seasonal factors.

## Annex A

### Household Consumption Price Survey Forms, ICP 2011

#### Single Product Survey Form

ICP 2011 Household Consumption Price Survey  
Single Product Survey Form

<b>Country code</b>		<b>Year and quarter</b>	
<b>Country name</b>		<b>Price collection period</b>	
<b>Survey category</b>		<b>Observation date</b>	
<b>Basic heading code</b>		<b>Price collector name</b>	
<b>Basic heading name</b>		<b>Price collector signature</b>	
<b>Product code</b>		<b>Currency</b>	
<b>Product name</b>		<b>Currency unit</b>	
<b>Outlet code</b>		<b>Outlet type code</b>	
<b>Outlet name</b>		<b>Outlet type</b>	
<b>Outlet location code</b>		<b>Outlet location (Address)</b>	
<b>Observed quantity</b>		<b>Comments</b>	
<b>Observed UoM code</b>			
<b>Observed UoM name</b>			
<b>Observed price</b>			
<b>Price type code</b>			
<b>Price type</b>			

Note: UoM = unit of measurement.

*table continues next page*



## Annex B

### Homogeneous and Heterogeneous Basic Headings, ICP 2011

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
<i>Bread and cereals</i>				
110111.1	Rice (ND)	HO		Rice in all forms except flour
110111.2	Other cereals, flour, and other cereal products (ND)		HE	Maize, wheat, barley, oats, rye, and other cereals in the form of grain Meal or flour Cereal preparations (cornflakes, oat flakes, etc.) Other cereal products Malt, malt flour, malt extract, potato starch, tapioca, sago, and other starches Includes couscous, rice flour
110111.3	Bread (ND)	HO		Fresh bread and special bread
110111.4	Other bakery products (ND)		HE	Bakery products such as crispbread, rusks, toasted bread Bakery products such as biscuits, gingerbread, wafers, waffles, crumpets, muffins, croissants, cakes, tarts Bakery products such as pies, quiches, pizzas Includes mixes and doughs for the preparation of bakery products
110111.5	Pasta products (ND)	HO		Pasta products in all forms
<i>Meat and fish</i>				
110112.1	Beef and veal (ND)	HO		Fresh, chilled, or frozen meat of bovine animals
110112.2	Pork (ND)	HO		Fresh, chilled, or frozen meat of swine
110112.3	Lamb, mutton, and goat (ND)	HO		Fresh, chilled, or frozen meat of sheep and goat
110112.4	Poultry (ND)	HO		Fresh, chilled, or frozen meat of poultry (chicken, duck, goose, turkey, guinea fowl); includes edible poultry offal
110112.5	Other meats and meat preparations (ND)		HE	<b>OECD 110112.5 Other meats and edible offal (ND)</b> Fresh, chilled, or frozen meat of hare, rabbit, game (antelope, deer, boar, pheasant, grouse, pigeon, quail, etc.), marine mammals (seal, walrus, whale, etc.), horse, mule, donkey, camel, ostrich, kangaroo, alligator, etc.; fresh, chilled, or frozen edible offal <b>OECD 110112.6 Delicatessen and other meat preparations (ND)</b> Dried, salted, or smoked meat and edible offal (sausages, salami, bacon, ham, pâté, etc.); other preserved or processed meat and meat-based preparations (canned meat, meat extracts, meat juices, meat pies, etc.)
110113.1	Fresh, chilled, or frozen fish and seafood (ND)		HE	Fresh, chilled, or frozen fish Fresh, chilled, or frozen seafood (crustaceans, mollusks, and other shellfish, sea snails); includes land crabs, land snails, and frogs, and fish and seafood purchased live for consumption as food
110113.2	Preserved or processed fish and seafood (ND)		HE	Dried, smoked, or salted fish and seafood Other preserved or processed fish and seafood and fish and seafood-based preparations (canned fish and seafood, caviar, and other hard roes, fish pies, etc.)
<i>Milk, cheese, and eggs and oils and fats</i>				
110114.1	Fresh milk (ND)	HO		Raw milk; pasteurized or sterilized milk; includes whole and low fat milk, recombined or reconstituted milk, soya milk

table continues next page

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110114.2	Preserved milk and other milk products (ND)		HE	Condensed, evaporated, or powdered milk Yogurt, cream Milk-based desserts Milk-based beverages and other similar milk-based products Includes milk, cream, and yogurt containing sugar, cocoa, fruit, or flavorings
110114.3	Cheese (ND)	HO		
110114.4	Eggs and egg-based products (ND)	HO		Eggs and egg products made wholly from eggs
110115.1	Butter and margarine (ND)	HO		<b>OECD 110115.1 Butter (ND)</b> Butter and butter products (butter oil, ghee, etc.) <b>OECD 110115.2 Margarine (ND)</b> Margarine; includes "diet" margarine
110115.3	Other edible oil and fats (ND)		HE	Edible oils (olive oil, corn oil, sunflower seed oil, cottonseed oil, soybean oil, groundnut oil, walnut oil, etc.) Edible animal fats (lard, etc.); edible vegetable fats (peanut butter, etc.)
<i>Fruits and vegetables</i>				
110116.1	Fresh or chilled fruit (ND)		HE	Fresh fruit Chilled fruit Includes melons and watermelons
110116.2	Frozen, preserved, or processed fruit and fruit-based products (ND)		HE	Frozen fruit Dried fruit, fruit peel Fruit kernels, nuts, and edible seeds Other preserved fruit, processed fruit, and fruit-based products
110117.1	Fresh or chilled vegetables other than potatoes (ND)		HE	Fresh or chilled vegetables cultivated for their leaves or stalks (asparagus, broccoli, cauliflower, endive, fennel, spinach, etc.) Fresh or chilled vegetables cultivated for their fruit (aubergine, cucumber, courgette, green pepper, pumpkin, tomato, etc.) Fresh or chilled vegetables cultivated for their roots (beetroot, carrot, onion, parsnip, radish, turnip, etc.) Includes olives, garlic, pulses, sweet corn, sea fennel and other edible seaweed, mushrooms and other edible fungi
110117.2	Fresh or chilled potatoes (ND)	HO		Fresh or chilled potatoes; includes other tuber vegetables (manioc, arrowroot, cassava, sweet potatoes, etc.)
110117.3	Frozen, preserved, or processed vegetables and vegetable-based products (ND)		HE	Frozen vegetables, dried vegetables, other preserved vegetables, processed vegetables, vegetable-based products; includes frozen preparations such as chipped potatoes, lentils Products of potatoes and other tuber vegetables such as flour, meal, flakes, purees, chips, crisps
<i>Sugar, jam, honey, chocolate, and confectionery</i>				
110118.1	Sugar (ND)	HO		Cane or beet sugar, unrefined or refined, powdered, crystallized, or in lumps; includes artificial sugar substitutes

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110118.2	Jams, marmalades, and honey (ND)		HE	Jams, marmalades, compotes, jellies, fruit purees, and pastes Natural and artificial honey Maple syrup Molasses and parts of plants preserved in sugar
110118.3	Confectionery, chocolate, and ice cream (ND)		HE	<b>OECD 110118.3 Confectionery, chocolate, and other cocoa preparations (ND)</b> Chocolate in bars and slabs, chewing gum, sweets, toffees, pastilles, and other confectionery products; cocoa-based foods and cocoa-based dessert preparations <b>OECD 110118.4 Edible ice, ice cream, and sorbet (ND)</b> Edible ice, ice cream, and sorbet
110119.1	Food products n.e.c. (ND)		HE	Salt, spices (pepper, pimento, ginger, etc.) Culinary herbs (parsley, rosemary, thyme, etc.) Sauces, condiments, seasonings (mustard, mayonnaise, ketchup, soy sauce, etc.) Vinegar Prepared baking powders, baker's yeast, dessert preparations Soups, broths, stocks Culinary ingredients, etc. Homogenized baby food and dietary preparations irrespective of the composition
<i>Nonalcoholic beverages</i>				
110121.1	Coffee, tea, and cocoa (ND)		HE	Coffee, whether or not decaffeinated, roasted or ground Tea, maté, and other plant products for infusions Cocoa, whether or not sweetened, and chocolate-based powder Includes instant coffee, coffee substitutes, extracts and essences of coffee, tea substitutes, extracts and essences of tea, cocoa-based beverage preparations
110122.1	Mineral waters, soft drinks, fruit and vegetable juices (ND)		HE	<b>OECD 110122.1 Mineral waters (ND)</b> Mineral or spring waters; all drinking water sold in containers <b>OECD 110122.2 Soft drinks and concentrates (ND)</b> Soft drinks such as sodas, lemonades, and colas; syrups and concentrates for the preparation of beverages <b>OECD 110122.3 Fruit and vegetable juices (ND)</b> Fruit and vegetable juices
<i>Alcoholic beverages and tobacco</i>				
110211.1	Spirits (ND)		HE	Eaux-de-vie, liqueurs, and other spirits; includes mead, aperitifs other than wine-based aperitifs
110212.1	Wine (ND)	HO		Wine, cider, and perry, including sake, champagne and other sparkling wines, fortified wines, wine-based aperitifs
110213.1	Beer (ND)	HO		All kinds of beer such as ale, lager, and porter; includes nonalcoholic beer, shandy
110221.1	Tobacco (ND)	HO		Cigarettes, cigarette tobacco, and cigarette papers; cigars, pipe tobacco, chewing tobacco or snuff

table continues next page

Annex B (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
<i>Clothing and footwear</i>				
110311.1	Clothing materials, other articles of clothing, and clothing accessories (SD)		HE	<p><b>OECD 110313.1 Other articles of clothing and clothing accessories (SD)</b></p> <p>Ties, handkerchiefs, scarves, squares, gloves, mittens, muffs, belts, braces, aprons, smocks, bibs, sleeve protectors, hats, caps, berets, bonnets, etc.; sewing threads, knitting yarns, and accessories for making clothing such as buckles, buttons, press-studs, zip-fasteners, ribbons, laces, trimmings; includes gardening gloves and working gloves, crash helmets for motorcycles and bicycles</p> <p><b>OECD 110311.1 Clothing materials (SD)</b></p> <p>Clothing materials of natural fibers, manmade fibers, and their mixtures</p>
110312.1	Garments (SD) <sup>1</sup>		HE	<p><b>OECD 110312.1 Men's clothing (SD)</b></p> <p>Men's clothing as defined in note<sup>1</sup></p> <p><b>OECD 110312.2 Women's clothing (SD)</b></p> <p>Women's clothing as defined in note<sup>1</sup></p> <p><b>OECD 110312.3 Children's and infant's clothing (SD)</b></p> <p>Children's and infant's clothing as defined above; includes baby clothes and baby booties made of fabric</p>
110314.1	Cleaning, repair, and hire of clothing (S)	HO		Dry-cleaning, laundering, and dyeing of garments; darning, mending, repair, and altering of garments; hire of garments; includes total value of the repair service (i.e., both the cost of labor and the cost of materials are covered)
110321.1	Shoes and other footwear (SD) <sup>1</sup>		HE	<p><b>OECD 110321.1 Men's footwear (SD)</b></p> <p>Men's footwear as defined in note<sup>1</sup></p> <p><b>OECD 110321.2 Women's footwear (SD)</b></p> <p>Women's footwear as defined in note<sup>1</sup></p> <p><b>OECD 110321.3 Children's and infant's footwear (SD)</b></p> <p>Children's and infant's footwear as defined in note<sup>1</sup></p>
110322.1	Repair and hire of footwear (S)	HO		
<i>Housing, water, electricity, gas, and other fuels</i>				
110431.1	Maintenance and repair of the dwelling (ND)		HE	<p><b>OECD 110431.1 Materials for the maintenance and repair of the dwelling (ND)</b></p> <p>Products and materials such as paints and varnishes, renderings, wallpapers, fabric wall coverings, window panes, plaster, cement, putty, and wallpaper pastes purchased for minor maintenance and repair of the dwelling; includes small plumbing products (pipes, taps, joints, etc.), surfacing materials (floor boards, ceramic tiles, etc.), and brushes and scrapers for paint, varnish, and wallpaper</p> <p><b>OECD 110432.1 Services for the maintenance and repair of the dwelling (S)</b></p> <p>Services of plumbers, electricians, carpenters, glaziers, painters, decorators, floor polishers, etc. engaged for minor maintenance and repair of the dwelling; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered)</p>
110441.1	Water supply (ND)	HO		Water supply; includes associated expenditure such as hire of meters, reading of meters, standing charges

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110451.1	Electricity (ND)	HO		Electricity; includes associated expenditure such as hire of meters, reading of meters, standing charges
110452.1	Gas (ND)	HO		Town gas and natural gas; liquefied hydrocarbons (butane, propane, etc.); includes associated expenditure such as hire of meters, reading of meters, standing charges
110453.1	Other fuels (ND)		HE	<p><b>OECD 110453.1 Liquid fuels (ND)</b></p> <p>Domestic heating and lighting oils</p> <p><b>OECD 110454.1 Solid fuels (ND)</b></p> <p>Coal, coke, briquettes, firewood, charcoal, peat, and the like</p> <p><b>OECD 110455.1 Heat energy (ND)</b></p> <p>Hot water and steam purchased from district heating plants; includes associated expenditure such as hire of meters, reading of meters, standing charges; ice used for cooling and refrigeration purposes</p>
<i>Furnishings, household equipment, and routine maintenance of the house</i>				
110511.1	Furniture and furnishings (D)		HE	<p><b>OECD 110511.1 Kitchen furniture (D)</b></p> <p>Tables, chairs, cupboards, etc. for kitchens</p> <p><b>OECD 110511.2 Bedroom furniture (D)</b></p> <p>Beds, tables, chairs, wardrobes, chests of drawers, etc. for bedrooms; includes base-mattresses, mattresses, tatamis</p> <p><b>OECD 110511.3 Living room and dining room furniture (D)</b></p> <p>Sofas, sofa beds, couches, tables, chairs, cupboards, dressers, wall systems, bookshelves for living rooms and dining rooms</p> <p><b>OECD 110511.4 Other furniture and furnishings (D)</b></p> <p>Baby furniture such as cradles, high chairs, and play pens; camping and garden furniture; lighting equipment such as ceiling lights, standard lamps, globe lights, bedside lamps; pictures, sculptures, engravings, tapestries, and other art objects, including reproductions of works of art and other ornaments; screens, folding partitions, and other furniture and fixtures; includes bathroom cabinets, blinds with the exception of fabric blinds, mirrors, candleholders, candlesticks</p>
110512.1	Carpets and other floor coverings (D)	HO		Loose carpets, rugs, mats, and other such movable floor coverings; fitted carpets, linoleum, and other such fixed floor coverings; includes laying of floor covers
110513.1	Repair of furniture, furnishings, and floor coverings (S)	HO		Repair of furniture, furnishings, floor coverings; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered); restoration of works of art, antique furniture, and antique floor coverings other than those acquired primarily as stores of value (capital formation)
110521.1	Household textiles (SD)		HE	<p>Furnishing fabrics, curtain material, curtains, double curtains, awnings, door curtains, fabric blinds</p> <p>Bedding such as futons, pillows, bolsters, hammocks</p> <p>Bed linen such as sheets, pillowcases, blankets, traveling rugs, plaids, eiderdowns, counterpanes, mosquito nets</p> <p>Table linen and bathroom linen such as tablecloths, table napkins, towels, face cloths</p> <p>Other textile household articles such as shopping bags, laundry bags, shoe bags, covers for clothes and furniture, flags, sunshades</p> <p>Repair of such articles; includes cloth bought by the piece, oilcloth, bathroom mats, rush mats, door mats</p>

table continues next page

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110531.1	Major household appliances whether electric or not (D)		HE	Refrigerators, freezers, fridge-freezers Washing machines, dryers, drying cabinets, dishwashers Ironing and pressing machines Cookers, spit roasters, hobs, ranges, ovens, microwave ovens Air-conditioners, humidifiers, space heaters, water heaters, ventilators, extractor hoods Vacuum cleaners, steam-cleaning machines, carpet shampooing machines, machines for scrubbing Waxing and polishing floors; safes, sewing machines, knitting machines, water softeners, etc.
110532.1	Small electric household appliances (SD)		HE	Coffee mills, coffee makers Juice extractors Can openers Food mixers, deep fryers, meat grills Knives Toasters Ice cream makers, sorbet makers, yogurt makers Hot plates, irons, kettles, fans, electric blankets, etc.
110533.1	Repair of household appliances (S)	HO		Repair of household appliances; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered)
110541.1	Glassware, tableware, and household utensils (SD)		HE	Glassware, crystal ware, and ceramic ware of a kind used for table, kitchen, bathroom, toilet, office, and indoor decoration Cutlery, flatware, silverware Nonelectric kitchen utensils of all materials such as saucepans, stewpots, pressure cookers, frying pans, coffee mills, purée-makers, mincers, hot plates, household scales, other such mechanical devices Nonelectric household articles of all materials such as containers for bread, coffee, spices, etc., waste bins, wastepaper baskets, laundry baskets, portable money boxes and strong boxes, towel rails, bottle racks, irons and ironing boards, letter boxes, feeding bottles, thermos flasks, ice boxes Repair of glassware, tableware, and household utensils
110551.1	Major tools and equipment (D)		HE	Motorized tools and equipment such as electric drills, saws, sanders, hedge cutters Motorized tools and equipment such as garden tractors, lawn mowers, cultivators Motorized tools and equipment such as chain saws Motorized tools and equipment such as water pumps Repair of such articles Includes charges for leasing or rental of do-it-yourself machinery and equipment

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110552.1	Small tools and miscellaneous accessories (SD)		HE	<p>Small electric accessories such as power sockets, switches, wiring flex</p> <p>Small electric accessories such as electric bulbs, fluorescent lighting tubes, torches, hand lamps</p> <p>Small electric accessories such as electric batteries for general use</p> <p>Small electric accessories such as bells and alarms</p> <p>Hand tools such as saws, hammers, screwdrivers, wrenches, spanners, pliers, trimming knives, rasps and files</p> <p>Garden tools such as wheel barrows, watering cans, hoses</p> <p>Garden tools such as spades, shovels, rakes, forks, scythes, sickles, secateurs</p> <p>Garden tools such as ladders, steps</p> <p>Door fittings (hinges, handles, locks)</p> <p>Fittings for radiators and fireplaces</p> <p>Other metal articles for the house (curtain rails, carpet rods, hooks, etc.) or for the garden (chains, grids, stakes and hoop segments for fencing and bordering); repair of such articles</p>
110561.1	Nondurable household goods (ND)		HE	<p>Cleaning and maintenance products such as soaps, washing powders, washing liquids, scouring powders, detergents, disinfectant bleaches, softeners, conditioners, window-cleaning products</p> <p>Cleaning and maintenance products such as waxes, polishes</p> <p>Cleaning and maintenance products such as dyes</p> <p>Cleaning and maintenance products such as unblocking agents, disinfectants, insecticides, pesticides, fungicides</p> <p>Distilled water</p> <p>Articles for cleaning such as brooms, scrubbing brushes, dust pans and dust brushes, dusters</p> <p>Articles for cleaning such as tea towels, floor cloths, household sponges</p> <p>Articles for cleaning such as scourers, steel wool, chamois leathers</p> <p>Paper products such as filters, tablecloths and table napkins, kitchen paper, vacuum cleaner bags, cardboard tableware</p> <p>Other nondurable household articles such as matches, candles, lamp wicks, methylated spirits, clothes pegs, clothes hangers, pins, safety pins, sewing needles, knitting needles, thimbles, nails, screws, nuts and bolts, tacks, washers, glues and adhesive tapes for household use, string, twine, rubber gloves; includes polishes, creams, and other shoe-cleaning articles; aluminum foil, cellophane wrap, and plastic bin liners; shoe trees and shoehorns; fire extinguishers for households</p>
110562.1	Domestic services (S)		HE	<p>Domestic services supplied by paid staff in private service such as butlers, cooks, maids, cleaners, drivers, gardeners, governesses</p> <p>Domestic services supplied by paid staff in private service such as secretaries, tutors, au pairs</p> <p>Domestic services, including babysitting and housework, supplied by enterprises or self-employed persons</p>

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**Annex B (Continued)**

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
<i>Health</i>				
110611.1	Pharmaceutical products (ND)		HE	Medicinal preparations, medicinal drugs, patent medicines Serums and vaccines Vitamins and minerals, cod liver oil and halibut liver oil, oral contraceptives
110612.1	Other medical products (ND)		HE	Clinical thermometers Adhesive and nonadhesive bandages Hypodermic syringes First-aid kits Hot-water bottles and ice bags Medical hosiery products such as elasticized stockings and knee supports Pregnancy tests, condoms and other mechanical contraceptive devices
110613.1	Therapeutic appliances and equipment (D)		HE	Corrective eyeglasses and contact lenses Hearing aids Glass eyes Artificial limbs and other prosthetic devices Orthopedic braces and supports, orthopedic footwear Surgical belts, trusses and supports, neck braces Medical massage equipment and health lamps Powered and unpowered wheelchairs and invalid carriages Special beds, crutches Electronic and other devices for monitoring blood pressure, etc. Repair of such articles; includes dentures but not fitting costs
110621.1	Medical services (S)	HO		Services of physicians in general or specialist practice; includes orthodontic specialists
110622.1	Services of dentists (S)	HO		Services of dentists, oral hygienists, and other dental auxiliaries; includes fitting costs of dentures but not the dentures themselves
110623.1	Paramedical services (S)		HE	Services of medical analysis laboratories and X-ray centers Services of freelance nurses and midwives Services of freelance acupuncturists, chiropractors, optometrists, physiotherapists, speech therapists, etc. Medically prescribed corrective gymnastic therapy Outpatient thermal bath or seawater treatments Ambulance services other than hospital ambulance services Hire of therapeutic equipment Includes services of practitioners of traditional medicine

Annex B (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
<i>Transport</i>				
110711.1	Motor cars (D)		HE	<p><b>OECD 110711.1 Motor cars with a diesel engine (D)</b></p> <p>Motor cars, etc. with a diesel engine</p> <p><b>OECD 110711.2 Motor cars with a petrol engine of cubic capacity of less than 1,200 (D)</b></p> <p>Motor cars, etc. with a petrol engine of cubic capacity of less than 1,200</p> <p><b>OECD 110711.3 Motor cars with a petrol engine of cubic capacity of 1,200–1,699 (D)</b></p> <p>Motor cars, etc. with a petrol engine of cubic capacity of 1,200–1,699</p> <p><b>OECD 110711.4 Motor cars with a petrol engine of cubic capacity of 1,700–2,999 (D)</b></p> <p>Motor cars, etc. with a petrol engine of cubic capacity of 1,700–2,999</p> <p><b>OECD 110711.5 Motor cars with a petrol engine of cubic capacity of 3,000 and over (D)</b></p> <p>Motor cars, etc. with a petrol engine of cubic capacity of 3,000 and over</p>
110712.1	Motorcycles (D)	HO		Motorcycles of all types, scooters and powered bicycles; includes side cars, snowmobiles, rickshaws
110713.1	Bicycles (D)	HO		Bicycles and tricycles of all types; includes rickshaws
110714.1	Animal-drawn vehicles (D)	HO		Animal-drawn vehicles; includes animals required to draw the vehicles and related equipment (yokes, collars, harnesses, bridles, reins, etc.)
110722.1	Fuels and lubricants for personal transport equipment (ND)		HE	<p>Petrol and other fuels such as diesel, liquid petroleum gas, alcohol, and two-stroke mixtures</p> <p>Lubricants, brake and transmission fluids, coolants and additives</p> <p>Includes fuel for recreational vehicles covered under (11.09.21.1)</p>
110723.1	Maintenance and repair of personal transport equipment (SD)		HE	<p><b>OECD 110721.1 Spare parts and accessories for personal transport equipment (SD)</b></p> <p>Tires (new, used, or retreaded), inner-tubes, spark plugs, batteries, shock absorbers, filters, pumps, and other spare parts or accessories for personal transport equipment; includes fire extinguishers for transport equipment; products specifically for the cleaning and maintenance of transport equipment such as paints, chrome cleaners, sealing compounds, and bodywork polishes; covers for motor cars, motorcycles, etc.</p> <p><b>OECD 110723.1 Maintenance and repair of personal transport equipment (S)</b></p> <p>Services purchased for the maintenance and repair of personal transport equipment such as fitting of parts and accessories, wheel balancing, technical inspection, breakdown services, oil changes, greasing, and washing; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered)</p>
110724.1	Other services in respect of personal transport equipment (S)		HE	<p>Hire of garages or parking spaces not providing parking in connection with the dwelling</p> <p>Toll facilities (bridges, tunnels, shuttle-ferries, motorways, etc.) and parking meters</p> <p>Driving lessons, driving tests, driving licenses</p> <p>Road worthiness tests; hire of personal transport equipment without drivers</p>

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**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110731.1	Passenger transport by railway (S)	HO		Urban and suburban transport of individuals and groups of persons and luggage by train, tram, and underground; long-distance transport of individuals and groups of persons and luggage by train; includes transport of private vehicles
110732.1	Passenger transport by road (S)	HO		Urban and suburban transport of individuals and groups of persons and luggage by bus, taxi, and hired car with driver; long-distance transport of individuals and groups of persons and luggage by coach, taxi, and hired car with driver
110733.1	Passenger transport by air (S)	HO		Transport of individuals and groups of persons and luggage by airplane and helicopter
<i>Communication</i>				
110811.1	Postal services (S)	HO		Payments for the delivery of letters, postcards, and parcels; private mail and parcel delivery; includes all purchases of new postage stamps, pre-franked postcards, aerograms
110821.1	Telephone and telefax equipment (D)		HE	Purchases of telephones, radio-telephones Telefax machines, telephone answering machines, telephone loudspeakers Repair of such articles
110831.1	Telephone and telefax services (S)	HO		Installation and subscription costs of personal telephone equipment; telephone calls from a private line or from a public line (public telephone box, post office cabin, etc.); telephone calls from hotels, cafés, restaurants, and the like; telegraphy, telex and telefax services; information transmission services; Internet connection services; hire of telephones, telefax machines, telephone answering machines, and telephone loudspeakers; includes radiotelephony, radiotelegraphy, and radiotelex services
<i>Recreation and culture</i>				
110911.1	Audiovisual, photographic, and information processing equipment (D)		HE	<b>OECD 110911.1 Equipment for the reception, recording, and reproduction of sound and pictures (D)</b> Television sets, videocassette players and recorders, television aerials of all types; radio sets, car radios, radio clocks, two-way radios, amateur radio receivers and transmitters; gramophones, tape players and recorders, cassette players and recorders, CD players, personal stereos, stereo systems, and their constituent units (turntables, tuners, amplifiers, speakers, etc.), microphones and earphones <b>OECD 110912.1 Photographic and cinematographic equipment and optical instruments (D)</b> Still cameras, movie cameras, sound-recording cameras, video cameras and camcorders, film and slide projectors, enlargers and film processing equipment, accessories (screens, viewers, lenses, flash attachments, filters, exposure meters, etc.), binoculars, microscopes, telescopes, and compasses <b>OECD 110913.1 Information processing equipment (D)</b> Personal computers, visual display units, printers and miscellaneous accessories accompanying them; computer software packages such as operating systems, applications, languages; calculators, including pocket calculators; typewriters and word processors; includes telefax and telephone answering facilities provided by personal computers

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110914.1	Recording media (SD)		HE	<p><b>OECD 110914.1 Pre-recorded recording media (SD)</b></p> <p>Records and compact discs; prerecorded tapes, cassettes, videocassettes, diskettes, and CD-ROMs for tape recorders, cassette recorders, video recorders, and personal computers; includes prerecorded diskettes and CD-ROMs containing books, dictionaries, encyclopedias, foreign language trainers, multimedia presentations, etc. in the form of software</p> <p><b>OECD 110914.2 Unrecorded recording media (SD)</b></p> <p>Unrecorded tapes, cassettes, videocassettes, diskettes, and CD-ROMs for tape recorders, cassette recorders, video recorders, and personal computers; unexposed films, cartridges, and discs for photographic and cinematographic use; includes photographic supplies such as paper and flash bulbs; unexposed film the price of which includes the cost of processing without identifying it</p>
110915.1	Repair of audiovisual, photographic, and information processing equipment (S)	HO		<p>Repair of audiovisual, photographic, and information processing equipment; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered)</p>
110921.1	Major durables for outdoor and indoor recreation (D)		HE	<p><b>OECD 110921.1 Major durables for outdoor recreation (D)</b></p> <p>Camper vans, caravans, and trailers; airplanes, microlight aircraft, gliders, hang-gliders, and hot-air balloons; boats, outboard motors, sails, rigging, and superstructures; horses and ponies, horse- or pony-drawn vehicles and related equipment (harnesses, bridles, reins, saddles, etc.); major products for games and sport such as canoes, kayaks, wind-surfing boards, sea-diving equipment, and golf carts; includes fitting out of boats, camper vans, caravans, etc.</p> <p><b>OECD 110922.1 Musical instruments and major durables for indoor recreation (D)</b></p> <p>Musical instruments of all sizes, including electronic musical instruments such as pianos, organs, violins, guitars, drums, trumpets, clarinets, flutes, recorders, harmonicas; billiard tables, ping-pong tables, pinball machines, gaming machines, etc.</p>
110923.1	Maintenance and repair of other major durables for recreation and culture (S)	HO		<p>Maintenance and repair of other major durables for recreation and culture; includes total value of the service (i.e., both the cost of labor and the cost of materials are covered); laying up for winter of boats, camper vans, caravans, etc.; hanger services for private planes; marina services for boats; veterinary and other services (stabling, feeding, farriery, etc.) for horses and ponies purchased for recreational purposes</p>
110931.1	Other recreational items and equipment (SD)		HE	<p><b>OECD 110931.1 Games, toys, and hobbies (SD)</b></p> <p>Card games, parlor games, chess sets, and the like; toys of all kinds, including dolls, soft toys, toy cars and trains, toy bicycles and tricycles, toy construction sets, puzzles, plasticine, electronic games, masks, disguises, jokes, novelties, fireworks, festoons, and Christmas tree decorations; stamp-collecting requisites (used or canceled postage stamps, stamp albums, etc.), other products for collections (coins, minerals, zoological and botanical specimens, etc.), and other tools and articles n.e.c. for hobbies; includes video game software; video game computers that plug into a television set; video game cassettes and video game CD-ROMs</p>

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Annex B (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
				<p><b>OECD 110932.1 Equipment for sport, camping, and open-air recreation (SD)</b></p> <p>Gymnastic, physical education, and sports equipment such as balls, rackets, bats, skis, golf clubs, foils, sabres, poles, weights, discuses, javelins, dumbbells, chest expanders and other body-building equipment; parachutes and other sky diving equipment; firearms and ammunition for hunting, sport, and personal protection; fishing rods and other equipment for fishing; equipment for beach and open-air games such as bowls, croquet, frisbee, and inflatable boats, rafts, and swimming pools; camping equipment such as tents and accessories, sleeping bags and backpacks, air mattresses and inflating pumps, camping stoves and barbecues; repair of such articles; includes game-specific footwear (ski boots, football boots, golf shoes, and other such footwear fitted with ice skates, rollers, spikes, studs, etc.); protective headgear for sports; other protective gear for sports such as life jackets, boxing gloves, body padding, shin guards, goggles, belts, supports, etc.</p>
110933.1	Gardens and pets (ND)		HE	<p><b>OECD 110933.1 Gardens, plants, and flowers (ND)</b></p> <p>Natural or artificial flowers and foliage, plants, shrubs, bulbs, tubers, seeds, fertilizers, composts, garden peat, turf for lawns, specially treated soils for ornamental gardens, horticultural preparations, pots and pot holders; includes natural and artificial Christmas trees, delivery charges for flowers and plants</p> <p><b>OECD 110934.1 Pets and related products (ND)</b></p> <p>Pets, pet foods, veterinary and grooming products for pets, collars, leashes, kennels, birdcages, fish tanks, cat litters, etc.</p>
110935.1	Veterinary and other services for pets (S)	HO		Veterinary and other services for pets such as grooming and boarding
110941.1	Recreational and sporting services (S)		HE	<p>Services provided by sports stadiums, horse racing courses, motor racing circuits, velodromes, skating rinks, swimming pools, golf courses, gymnasiums, fitness centers, tennis courts, squash courts, bowling alleys, fairs, amusement parks, roundabouts, seesaws and other playground facilities for children, pinball machines and other games for adults other than games of chance, ski slopes, ski lifts, and the like</p> <p>Hire of equipment and accessories for sport and recreation such as airplanes, boats, horses, skiing, and camping equipment</p> <p>Out-of-school individual or group lessons in bridge, chess, aerobics, dancing, music, skating, skiing, swimming, or other pastimes</p> <p>Services of mountain guides, tour guides, etc.; navigational aid services for boating</p> <p>Includes hire of game-specific footwear (ski boots, football boots, golf shoes, and other such footwear fitted with ice skates, rollers, spikes, studs, etc.)</p>
110942.1	Cultural services (S)		HE	<p><b>OECD 110942.1 Photographic services (S)</b></p> <p>Services of photographers such as film developing, print processing, enlarging, portrait photography, wedding photography</p> <p><b>OECD 110942.2 Other cultural services (S)</b></p> <p>Services provided by cinemas, theaters, opera houses, concert halls, music halls, circuses, sound and light shows, museums, libraries, art galleries, exhibitions, historic monuments, national parks, zoological and botanical gardens, aquariums; hire of equipment and accessories for culture such as television sets, videocassettes; television and radio broadcasting—in particular, license fees for television equipment and subscriptions to television networks; includes services of musicians, clowns, performers for private entertainment.</p>

**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
110951.1	Newspapers, books, and stationery (ND)		HE	<p><b>OECD 110951.1 Books (SD)</b></p> <p>Books, including atlases, dictionaries, encyclopedias, textbooks, guidebooks, and musical scores; includes scrapbooks and albums for children; bookbinding</p> <p><b>OECD 110952.1 Newspapers and periodicals (ND)</b></p> <p>Newspapers, magazines, and other periodicals</p> <p><b>OECD 110953.1 Miscellaneous printed matter, stationery, and drawing materials (ND)</b></p> <p>Writings pads, envelopes, account books, notebooks, diaries, etc.; pens, pencils, fountain pens, ballpoint pens, felt-tip pens, inks, ink erasers, rubbers, pencil sharpeners, etc.; stencils, carbon paper, typewriter ribbons, inking pads, correcting fluids, etc.; paper punches, paper cutters, paper scissors, office glues and adhesives, staplers and staples, paper clips, drawing pins, etc.; drawing and painting materials such as canvas, paper, card, paints, crayons, pastels, and brushes; catalogs and advertising material; posters, plain or picture postcards, calendars; greeting cards and visiting cards, announcement and message cards; maps and globes; includes toner and ink cartridges; educational materials such as exercise books, slide rules, geometry instruments, slates, chalks, and pencil boxes</p>
<i>Restaurants and hotels</i>				
111111.1	Catering services (S)		HE	<p><b>OECD 111111.1 Restaurant services whatever the type of establishment (S)</b></p> <p>Expenditures primarily on food bought away from home; includes the sale of food products for immediate consumption by kiosks, street vendors, and the like; food products dispensed ready for consumption by automatic vending machines; the sale of cooked dishes by restaurants for consumption off their premises; the sale of cooked dishes by catering contractors whether collected by the customer or delivered to the customer's home</p> <p><b>OECD 111111.2 Pubs, bars, cafés, tea rooms, and the like (S)</b></p> <p>Expenditures primarily on beverages bought away from home; includes the sale of beverages for immediate consumption by kiosks, street vendors, and the like; beverages dispensed ready for consumption by automatic vending machines</p> <p><b>OECD 111112.1 Canteens (S)</b></p> <p>Catering services of work canteens, office canteens, and canteens in schools, universities, and other educational establishments; includes university refectories, military messes, wardrooms</p>
111211.1	Accommodation services (S)	HO		<p>Accommodation services provided by hotels, boarding houses, motels, inns, holiday villages, holiday centers, camping sites, caravan sites, youth hostels, mountain chalets, boarding schools, universities and other educational establishments, public transport (trains, boats, etc.) when priced separately, hostels for young workers or immigrants</p>
<i>Miscellaneous goods and services</i>				
112111.1	Hairdressing salons and personal grooming establishments (S)	HO		<p>Services of hairdressing salons, barbers, beauty shops, manicures, pedicures, Turkish baths, saunas, solariums, nonmedical massages, etc.; includes body care, depilation, and the like</p>

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**Annex B** (Continued)

Code	Basic heading	Homogeneous (HO)	Heterogeneous (HE)	Example of clusters under basic headings
111212.1	Appliances, articles, and products for personal care (ND)		HE	<p><b>OECD 111212.1 Electric appliances for personal care (SD)</b></p> <p>Electric razors and hair trimmers, hand-held and hood hair dryers, curling tongs and styling combs, sun-lamps, vibrators, electric toothbrushes and other electric appliances for dental hygiene, etc.; repair of such articles</p> <p><b>OECD 111213.1 Other appliances, articles, and products for personal care (ND)</b></p> <p>Nonelectric appliances: razors and hair trimmers and blades therefore; scissors, nail files, combs, shaving brushes, hairbrushes, toothbrushes, nail brushes, hairpins, curlers, personal weighing machines, baby scales, etc.; articles for personal hygiene: toilet soap, medicinal soap, cleansing oil and milk, shaving soap, shaving cream and foam, toothpaste, etc.; beauty products: lipstick, nail varnish, makeup and makeup removal products (including powder compacts, brushes, and powder puffs), hair lacquers and lotions, pre-shave and after-shave products, sunbathing products, hair removers, perfumes and toilet waters, personal deodorants, bath products, etc.; other products: toilet paper, paper handkerchiefs, paper towels, sanitary towels, cotton wool, cotton tops, baby napkins, etc.</p>
111231.1	Jewelry, clocks, and watches (D)	HO		Precious stones and metals and jewelry fashioned out of such stones and metals; costume jewelry, cuff links, and tie-pins; clocks, watches, stopwatches, alarm clocks, travel clocks; repair of such articles
111232.1	Other personal effects (SD)		HE	<p>Suitcases, trunks, travel bags, attaché cases, satchels, handbags</p> <p>Wallets, purses, etc.</p> <p>Articles for babies: baby carriages, push-chairs, carry-cots, recliners, car beds and seats, back carriers, front carriers, reins and harnesses, etc.</p> <p>Articles for smokers: pipes, lighters, cigarette cases, cigar cutters, ashtrays, etc.</p> <p>Miscellaneous personal articles: sunglasses, walking sticks and canes, umbrellas and parasols, fans, key rings, etc.</p> <p>Funerary articles: urns, coffins, gravestones, etc.</p> <p>Repair of such articles</p> <p>Includes lighter fuel, wall thermometers, and barometers</p>
111262.1	Other financial services n.e.c. (S)	HO		Actual charges for the financial services of banks, post offices, saving banks, money changers, and similar financial institutions; fees and service charges for brokers, investment counselors, tax consultants, and the like; administrative charges of private pension funds and the like
111271.1	Other services n.e.c. (S)		HE	<p>Fees for legal services, employment agencies, etc.</p> <p>Charges for undertaking and other funeral services</p> <p>Payment for the services of estate agents, housing agents, auctioneers, operators of salesrooms, and other intermediaries</p> <p>Payment for photocopies and other reproductions of documents</p> <p>Fees for the issue of birth, marriage, and death certificates and other administrative documents</p> <p>Payment for newspaper notices and advertisements</p> <p>Payment for the services of graphologists, astrologers</p> <p>Private detectives, bodyguards</p> <p>Matrimonial agencies and marriage guidance counselors</p> <p>Public writers, miscellaneous concessions (seats, toilets, cloakrooms), etc.</p>

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

Note: ND = nondurable good; SD = semidurable good; S = consumer service; D = durable good; n.e.c. = not elsewhere classified.

1. <http://www.oecd.org/std/prices-ppp/PPP%20manual%20revised%202012.pdf>.

## NOTES

1. See Dikhanov (2009) for explicit examples used in the Asia and the Pacific region.
2. In addition to the survey on household consumption products, ICP price surveys were carried out on machinery and equipment, construction, health, education, and housing.
3. The ICP 2011 regions were Africa, Asia and the Pacific, CIS, Eurostat-OECD, Latin America, the Caribbean, Western Asia, and the Pacific Islands.

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