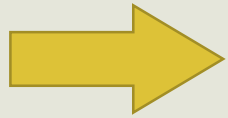# Module 5: Household Individual Consumption

Training Workshop on Price Statistics for the Production of Purchasing Power Parities and the Integration between CPI and PPPs in the Arab Region

07-08 June 2021

Objectives of **Section 3:** Price and Other Related Data for PPPs

Data Collection Approaches for:

Household Individual Consumption

Government Consumption

Gross Fixed Capital Formation

Objectives of **Module 5:** Household Individual Consumption

Previously, we covered:
- ✓ **Data Requirements**
- ✓ **Data characteristics**

➡️ In order to ensure these requirements, a framework and tightly-defined common item lists are developed for price and other **Data Collection**.

Objectives of **Module 5:** Household Individual Consumption

Data Collection:

Household Individual Consumption

- Main Survey
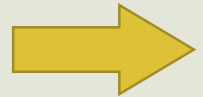- Housing
  - Private Education

Government Consumption

- Compensation of employees paid by general government to employees producing individual and collective services

Gross Fixed Capital Formation

- Machinery and equipment
- Construction and civil engineering

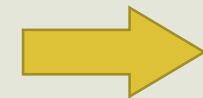# Objectives of **Module 5:** Household Individual Consumption

Household Individual Consumption:

➡ ▪ **Main Survey**
  - **Survey Framework**

➡ ▪ **Housing**
  - **Housing Rental Approach**
  - **Housing Volume Approach**
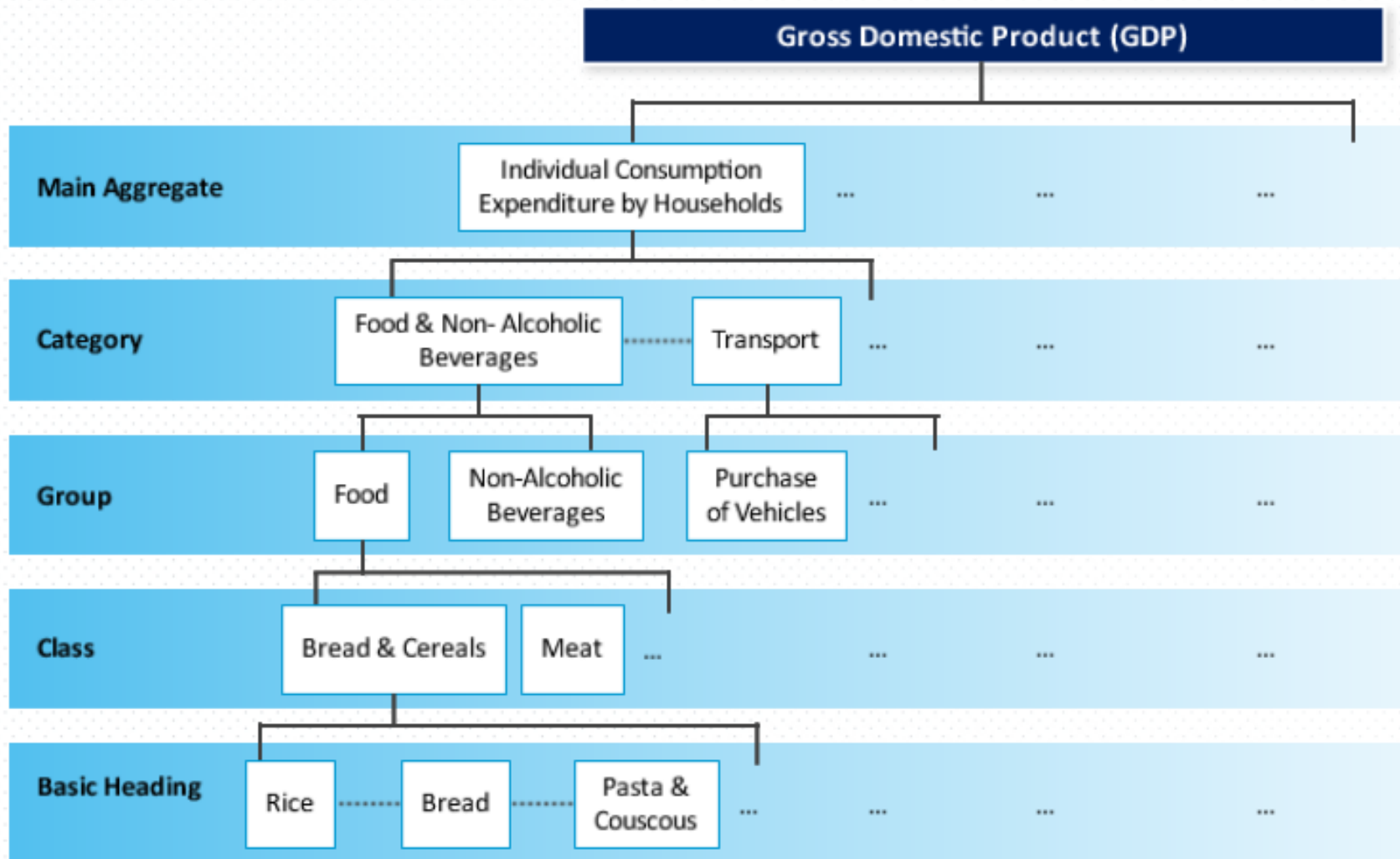
➡ ▪ **Private Education**

Main Survey

- Because household consumption expenditure accounts for over 60 percent of GDP in the majority of countries, the survey of consumer goods and services is the most important price survey.

- This survey is called the main survey, and it includes a wide range of items that are goods and services.

Main Survey (cont'd)

Survey Framework

- There are *3 Sampling Aspects* of the **Main Survey:**

Sampling Aspects

1. Stratifying a country to ensure all geographical locations are covered

2. Selection of individual outlets within identified geographical locations

3. Selection of products to be priced

- For accurate results, average national prices covering expenditures throughout the economic activities of a country are needed.

- Countries have different pricing patterns and levels depending on the different regions within a country.
- Step 1 in the sampling process involves stratifying each country into regions, provinces, states, and so on in order to ensure that all geographical locations are covered.
- Once they are determined, the regions, cities, villages, towns and so on are chosen.

- Urban and rural regions should be covered in these selections.

Country A							
Region A		Region B		Region C		Region ...	
City A	Village A	City ...	Village ...	City ...	Village ...	City ...	Village ...
City B	Village B	City ...	Village ...	City ...	Village ...	City ...	Village ...
City C	Village C	City ...	Village ...	City ...	Village ...	City ...	Village ...
Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural

2 Selection of individual outlets within identified geographical locations

- After the locations are identified, shopping districts within each city, town, and village are selected with associated outlet types.

(cont'd)
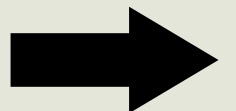
3 ▸ Selection of products to be priced

- *2 sets of items* are used for the comparison:
  1. ***Global Core Items***
  2. ***Regional Items***

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1. ***Global Core Items:***

- A global PPP comparison is created by using global core items that are selected and defined in consultation with global, regional, and national implementing agencies and with subject matter experts.
- Additionally, global core items are selected based on the item availability and representatively across the world.
- These items are used to provide links and overlaps between the regional comparisons at the basic heading level in order to combine them in a global comparison.

3 Selection of products to be priced (cont'd)

2. Regional Items:

- Each region selects and defines its own regional products in consultation with regional and national implementing agencies and with subject matter experts.
- Regional items are selected based on the product availability and representativity within the region.

Global Core Items and **Regional Items** are combined, and avoiding any duplication, to create a **REGIONAL LIST**.

→ **Global Core Items** + **Regional Items** = **REGIONAL LIST**

Global Core Items	Regional Items
▪ Global core items are selected and defined in consultation with global, regional, national implementing agencies and with subject matter experts. ▪ Global core items are selected based on the item availability and representativity across the world. ▪ Global core items are used to provide links and overlaps between the regional comparisons at the basic heading level in order to combine them in a global comparison.	▪ Each region selects and defines its own regional items in consultation with regional and national implementing agencies and with subject matter experts. ▪ Regional items are selected based on the item availability and representativity within the region.

Regional List

Structured Product Description (SPD)

- The ICP facilitates the price collection using Structured Product Descriptions.

- SPDs provide a method for systematically describing all price-determining characteristics for every possible product consumers can purchase.

- These characteristics are used to define the different kinds of garments, for example, that can be purchased.

Structured Product Description (SPD) Example

- The SPDs will differ depending on the items as they have different criteria to define them.

- Here is an example of the SPDs for two fruit items.

- Each item has an item code that is followed by the item name.

- We can see here that the first nine digits of the item codes are the same for the two items because they fall under the same basic heading code for "Fresh or chilled fruit."

- Other specifications to define the items such as size or weight, packaging, quality are included in the SPD, as well as what not-to-price, or to exclude.

11.01.16.1.01.01 - Fresh apple, red delicious	
Brand	
Reference Quantity	**1 Kilogram**
Quantity	**1**
Unit of Measurement	Kilogram
Type	Fresh red delicious
Packaging	Sold loose
Quality	Good quality; intact (unbroken, unmarked) skin
Exclude	Fair trade fruits, organic fruits
Specify	Whether "in season" or "out-of-season"

| 11.01.16.1.01.07 - Fresh pineapples	
Brand	
Reference Quantity	**1 Kilogram**
Quantity	**1**
Unit of Measurement	Kilogram
Type	Fresh pineapples
Packaging	Sold loose
Quality	Good quality; intact (unbroken, unmarked) skin
Exclude	Fair trade fruits, organic fruits
Specify	Whether "in season" or "out-of-season"

Housing

- Under the "individual consumption expenditures by households" main aggregate, there are 2 basic headings that address housing prices, and are commonly referred to as "Housing Rentals".

- They are called "Actual Rentals For Housing" and "Imputed Rentals For Housing".

- For the remainder of the basic headings related to housing, countries collect prices using the Household Final Consumption Survey.

- What distinguishes housing rentals from other segments of the ICP and makes them <u>comparison-resistant</u> is that the price collection method is not straightforward.

- ➡ **There are *2 separate approaches* to gather housing rental data.**

Housing (cont'd)
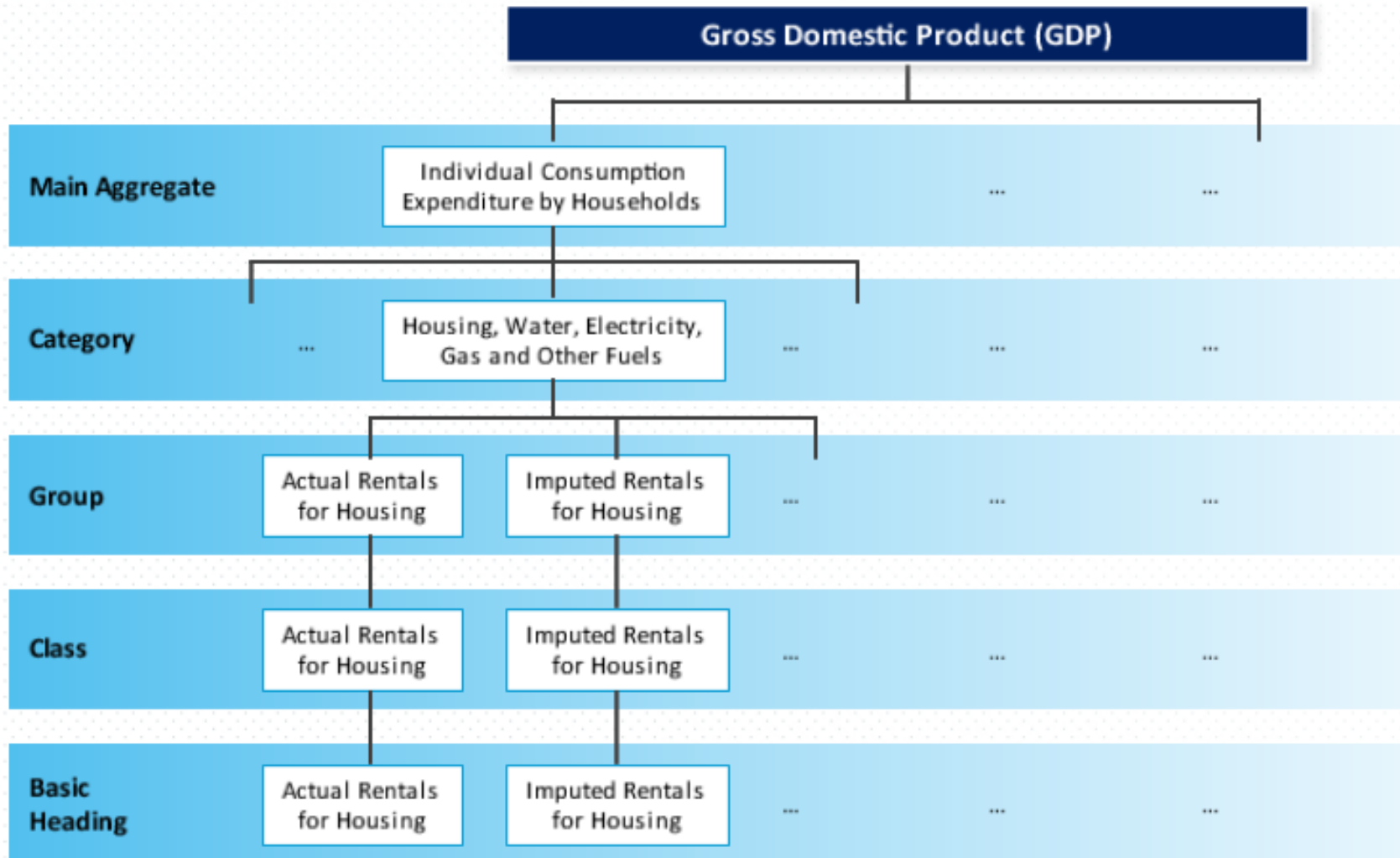
Housing (cont'd)

Housing Rentals

- Housings prices fall into *2 subsets*—*Rented* and *Owner- Occupied Housing.*

1. *Rented Housing* ➡ easier to identify actual rents paid by tenants

2. *Owner- Occupied Housing* ➡ more complex, as we must impute how much owner-occupiers *would* have paid in rent if they did not own their dwellings.

Regardless of the subsets, household consumption expenditures should include both the **actual expenditure by households on rents for dwellings** and **an estimate of how much owner occupiers would pay if they were to pay rent for their dwellings instead of owning them.** ➡

Housing (cont'd)

→ This is defined in the SNA and it recommends that imputed rents be estimated using the actual rents paid for an equivalent dwelling.

An equivalent dwelling is one that is of same type, same size, has the same amenities, and is in the same location.

Example: If an individual owns a two-story, detached house with six rooms, and 200 square meters of floor space in a suburb of the capital city, the amount needs to be imputed at the average rent actually paid for an equivalent dwelling, in the specific location with the same amenities.

Housing (cont'd)

Rented	Owner-occupied
Actual rents paid by tenants	Imputation of how much owner-occupiers would have paid in rent if not owning their dwellings

Actual Rents Paid for Equivalent Dwelling		Imputed Rents
Two-story		Two-story
Six room		Six room
Suburb of the capital city		Suburb of the capital city
Amenities		Amenities

Housing (cont'd)

Collecting Housing Data

- There are *2 approaches* when collecting data and metadata to estimate housing PPPs:

1. ***Price Approach***
2. ***Volume (Quantity) Approach***

1. ***Price Approach***:

- Collects data related to rentals.
- National average rents for different types of dwellings, such as apartments and houses can be collected using this approach.
- This approach works well in countries where the dwellings actually rented are representative of the stock of dwellings as a whole.
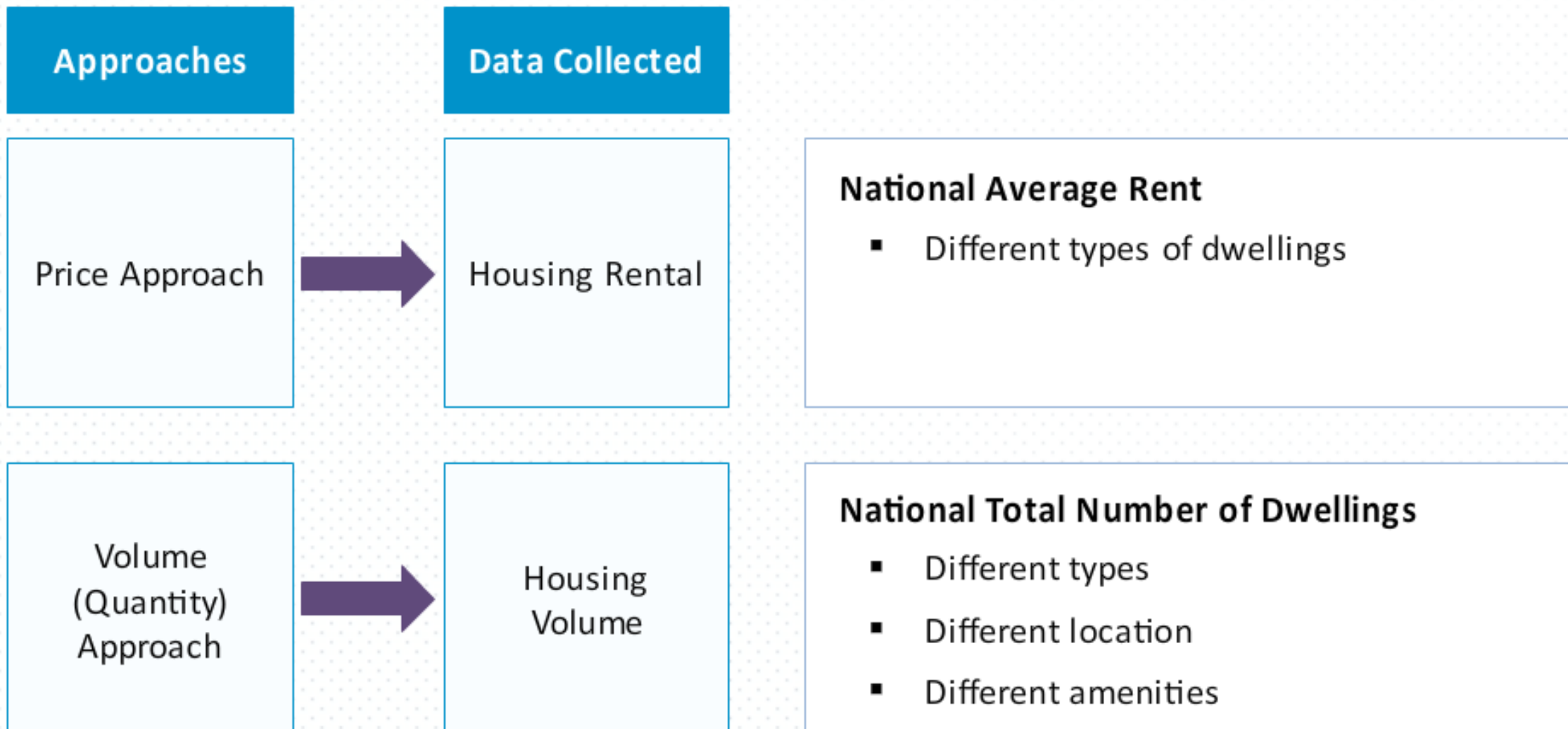
Housing (cont'd)

- In countries that do not apply this rental equivalence method, the PPPs for housing are obtained indirectly using the ***Volume (Quantity) Approach***.

2. ***Volume (Quantity) Approach:***

   - Involves measuring relative quantity between countries.
   - Collects national total numbers of dwellings of varying different types, locations, and amenities.

Housing (cont'd)

Approaches	Data Collected	
Price Approach	Housing Rental	**National Average Rent** ▪ Different types of dwellings
Volume (Quantity) Approach	Housing Volume	**National Total Number of Dwellings** ▪ Different types ▪ Different location ▪ Different amenities

Housing (cont'd)

1. Price Approach Data Collection

- This is an example of how housing rental data can be collected.

- The form looks similar to the SPDs we previously saw.

- For each type of dwelling, it specifies details of the type and amenities of the dwelling and asks for the national average of annual rent and the dwelling size.

- This form help countries to collect the information for the equivalent dwellings.

Item Code	1104111101
Item Name	Single-detached house, 120-180 m^2
Number of units	1
Unit of measurement	Annual rent (national average)
Dwelling size (usable surface) in m^2	120-180
Dwelling size (usable surface) in approximate sqft	1300-1950
Dwelling facilities include	Electricity line; inside water (cold and hot); private toilet with water; private kitchen
Rent excludes	Furniture; materials and services for maintenance; energy supply (such as water, electricity, gas and other fuels); subsidies from government or employers
Specify	Dwelling size; Annual rent per m^2

DATA ENTRY	Example	1104111101 Single-detached house, 120-180 m^2
Annual rent	20,000	
Dwelling Size (usable surface) in m^2	150	
Annual rent per m^2	133	

Item Code	1104111113
Item Name	Two-bedroom apartment, 80-120 m^2
Number of units	1
Unit of measurement	Annual rent (national average)
Dwelling size (usable surface) in m^2	80-120
Dwelling size (usable surface) in approximate sqft	850-1300
Dwelling facilities include	Electricity line; inside water (cold and hot); private toilet with water; private kitchen
Rent excludes	Furniture; materials and services for maintenance; energy supply (such as water, electricity, gas and other fuels); subsidies from government or employers
Specify	Dwelling size; Annual rent per m^2

DATA ENTRY	Example	1104111113 Two-bedroom apartment, 80-120 m^2
Annual rent	20,000	
Dwelling Size (usable surface) in m^2	150	
Annual rent per m^2	133	

Housing (cont'd)

2. Volume Approach Data Collection

- Here is an example of how housing volume data can be collected.

- This form asks for the national total number of dwellings that are either formal or informal.

- It is also further divided by location – urban and rural, and features of housing – such as electricity, inside water, private toilets, and central heating and air-conditioning.

- The form also asks for number of dwelling units that are rented or owner-occupied.

National Total	Formal dwellings							Informal dwellings
	Type of dwelling construction				Location of dwellings			
	Modern construction		Traditional	Dwelling Type Total	Urban	Rural	Location Total	
	Houses (H)	Apartments (A)	(T)	(C)*=(H+A+T)	(U)	(R)	(L)*=(U+R)	(I)
Number of dwelling units								
Number of occupants								
Number of rooms								
Usable surface area in m²								
Number of dwelling units with:								
Electricity								
Inside water								
Private toilets								
Central heating								
Air conditioning								
Number of dwelling units that are:								
Rented								
Owner occupied								

Dwelling Total (C) and Location Total (L) would yield the same number. (C)=(L)

Private Education

- Education is a category under the Individual consumption expenditures by households Main aggregate.

- Tuitions are collected for different education levels in different locations and different private schools/universities.

- Education data is collected for the 2 academic years falling within the same calendar year.

- Each education level in the Data Collection Form also has SPDs clarifying requirements in each education level.

- ISCED levels are also specified for each education level for more clarification.

Item Code	1110111010	1110111020
Item Name	Primary Education	Lower Secondary General Education
Number of units	1	1
Unit of measurement	Annual tuition	Annual tuition
Establishment type	Private	Private
Type	Primary education, day school	Lower secondary, day school
Level of education	ISCED 2011 level 1 – Primary education	ISCED 2011 level 2 – Lower secondary education; entry after completion of primary education
Field of study		ISCED Fields of Education and Training 2013: 00 Generic programmes and qualifications
Medium (or language) of instruction	Official language	Official language
Student	A resident (national of the country concerned)	A resident (national of the country concerned)
Entrance age (years)	5-8	10-13
Fee	Average annual tuition per student	Average annual tuition per student
Exclude from tuition	Payments for educational materials and education support services	Payments for educational materials and education support services

Thank You