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#### Group of Experts on Consumer Price Indices

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##### House price indices

### Ukrainian practice of calculating house price indices

#### Report of the State Statistical Committee of Ukraine<sup>1</sup>

##### *Summary*

This document describes the practice of calculating house price indices in Ukraine. The report provides information on the scope of the consumer price index and a description of owner-occupied housing. The report also describes the challenges in calculating indices and plans for the future development of a system of house price index calculation in Ukraine.

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<sup>1</sup> This document was submitted on the above date owing to technical problems.

## **I. Use of consumer price indices**

1. The consumer price index (CPI) is used to address many public policy issues:
  - Measurement of consumer price inflation
  - National accounts deflation
  - Income indexation
  - Private contract indexation, etc.

## **II. Scope of the consumer price index**

### **A. Population coverage**

2. All households are covered in the calculation of the CPI except the wealthy segments of the population, as, firstly, their household expenditure is atypical and, secondly, reliable information on such segments is very difficult or sometimes impossible to obtain from household budget surveys, because they generally decline to participate in the surveys.
3. For the time being, apart from the single official (main) CPI in Ukraine, no sub-indices relating to the various subsectors of the population are calculated or published.

### **B. Geographical coverage**

4. Weights covering consumer expenditure of urban and rural households are used to calculate the CPI, but changes in prices are monitored only in the country's urban centres, as urban price trends are considered to be representative of the trends in rural areas. A "national" expenditure concept has been adopted to calculate the CPI; it covers all expenditure of residents, both within the country and abroad.

### **C. Regional indices**

5. In addition to the national (main) CPI, there are 27 regional indices that may be used for income indexation in Ukraine. Data from household budget surveys on expenditure in eight economic areas and Kyiv are used as weights to calculate the regional indices.

### **D. Coverage of goods and services**

6. All the goods and services most commonly purchased by households for their personal needs are included in the consumer basket for calculating the CPI, regardless of whether they are market-priced or price-controlled.
7. The following goods and services are not included in the calculation of the Ukrainian CPI:
  - (a) Luxury goods and services;
  - (b) Second-hand goods;
  - (c) Own account production;

- (d) Goods and services received as payment in kind;
- (e) Purchase of housing or land;
- (f) Social insurance contributions (deductions);
- (g) Income tax.

### III. Owner-occupied housing

8. A user cost approach is used to determine owner-occupied housing costs for the owners. The costs to owners who live in multiple dwelling units, except for luxury housing, of maintaining the dwelling (trash collection, cleaning, lighting and heating of staircases and landings and elevator servicing) and the grounds are included in the calculation of the Ukrainian CPI.

9. Under Ukrainian law, the price of housing services is regulated (set) by the local authorities. The cost of housing and grounds maintenance services varies depending on the following conditions:

- Place of residence (central or outlying district)
- Year of construction
- Amenity level of the dwellings (central heating, water mains, drainage system, etc.)
- Number of storeys
- Lifts
- Size of the plot, attached to the dwelling, etc.

10. The main source of data used to establish weights is the household budget survey. The weights are calculated on the basis of purchase prices, i.e. the expenditure on maintenance and housing services includes taxes and excludes subsidies.

Table 1

#### Weights for calculating the CPI for Ukraine, 2008 (%)

04	Housing, water, electricity, gas and other types of fuel	10.8
04.1	Actual rent for housing	0.04
04.2	Payment for owner-occupied housing	1.0
04.3	Housing maintenance and repairs	2.4
04.4	Water supply and other housing services	0.9
04.5	Electricity, gas and other types of fuel	6.5

### IV. Problems of calculating house price indices

11. The valuation of owner-occupied housing services is one of the most difficult problems in the compilation of the CPI. We are currently addressing several practical issues related to this.

#### A. Quality of sources of information

12. The basic source for calculating weights is the household budget survey (HBS). We believe that in Ukraine the main problem of this survey is the high rate of non-response

among households in the eighth, ninth and tenth deciles, which produces insufficiently reliable data on certain types of expenditure and thus makes adjustments necessary to take into account information from other sources.

13. A study was carried out in 2009 to explore the bias in the CPI owing to underreporting of income of the groups in the highest deciles. The results of the study indicated that the HBS should be adjusted with the use of data from administrative sources.

## **B. Access to data**

14. Here, we run up against the problem of obtaining data from the administrative sources. In order to receive appropriate information on a consistent basis, arrangements must be made for the provision of data to the statistical bodies from other State agencies, manufacturers and individual companies.

## **C. Methods of adjusting weights**

15. HBS data adjustment is to be carried out on the basis of a calibration procedure with the use of the g-Calib programme. It is necessary to develop the appropriate methodology and technology to introduce this procedure. Data compilation, checking and calibration analysis may be carried out by means of a standard SPSS, with the use of specially designed syntax files.

## **D. Challenges in sampling**

16. The choice of sampling method depends on the variety of available services, price range and magnitude of fluctuations in price. There are many housing service prices calculated for each building on the basis of such conditions as the year of construction, the number of storeys, and location in the city, etc., that pose specific challenges in price sampling. These challenges are most critical in cities with a population of more than 1 million. In Kyiv, for example, there are more than 10,000 tariffs for housing and grounds maintenance. At present the municipal authorities provide regional statistical bodies with averaged data, by type of dwelling.

## **E. Methods of calculation**

17. Fluctuations in prices (or tariffs) for consumer goods (or services) are checked on a monthly basis:

- Between the first and twenty-fifth of the month in the major provincial cities, Kyiv, Simferopol and Sevastopol
- Between the first and the twentieth in other urban centres

18. The monitoring of fluctuations in the price of housing services has its own specific characteristics. As the prices for housing services are set by regulations issued by the local authorities, price collection is conducted over the telephone once a month to determine whether or not there are any changes in the current month. If there are price changes the municipal administration sends the provincial statistical bodies the official documents (orders) with the new prices.

19. If the housing service prices are not effective as at the first day of the month, then the average price is calculated according to the formula for the weighted arithmetic average, and the number of days is used as weights.

## **V. Future plans**

20. One of the priorities in the area of price statistics is to develop methodologies to organize statistical observations of price changes in the market for new and existing housing. Ensuring uniform methodologies for building the entire framework for house price indices is the main concern in trying to maintain the system's conceptual integrity. Furthermore, in order to manage housing market processes effectively at the national and provincial levels, there is a need to take into consideration both the specificities of the provinces and their overall development trends.

21. Real estate transactions are becoming increasingly significant in the current circumstances. Price changes and index calculation for housing prices are monitored for the purpose of studying real estate market price trends and for the analysis and forecasting of national accounts indices and their conversion into comparable prices, and for conducting scientific studies.

22. The following must be determined to construct house price indices:

- Conceptual framework and data requirements for building house price indices
- Weights and data sources for weights
- Sampling methods
- Price data collection procedures
- Method of quality adjustment
- Calculation of price indices for elementary and high-level aggregates, etc.

23. These measures will be carried out within the framework of the twinning project to build the institutional capacity of the State Statistical Committee by assessing whether Ukrainian official statistics are in conformity with the European Statistics Code of Practice. This will help to produce quality and reliable house price indices in accordance with European statistical standards and will meet users' needs for accurate, new indicators that reflect the price situation in Ukraine.

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