Approved by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan

dated December 11, 2015

no. 201

**Methodology for assessing residential rent**

1. **General provisions**
2. The methodology for assessing residential rent (hereinafter - Methodology) was developed as part of the implementation of subparagraph 252 "Development of new and revision of existing methodological materials" Tasks 6.2.1 "Providing quality indicators for all areas, sectors of the economy and rationalizing the production of statistical data and developing a system for disseminating statistical information", Goals 6.2. "Improving the quality of statistical information provided" of the Operational Plan of the Ministry of National Economy of the Republic of Kazakhstan for 2015, as well as in accordance with subparagraph 5) of Article 12 of the Law of the Republic of Kazakhstan dated March 19, 2010 "On State Statistics" .
3. This Methodology is intended for use by the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan (hereinafter - the Committee) to calculate the output of housing services produced by homeowners for their own consumption, in accordance with international standards and is used exclusively for the purposes of the System of National Accounts.
4. The purpose of this Methodology is to evaluate housing services produced by homeowners for their own consumption, in accordance with market conditions, the latest achievements of methodological research. The application of this Methodology contributes to improving the quality of the calculation of the gross value added of subsection 6.8.2 "Leasing and management of own or leased real estate" in section L "Real estate operations".
5. The following materials were used as a methodological basis:

System of National Accounts 1993 prepared by the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD), the Statistical Office of the European Communities (Eurostat), the United Nations (UN) and the World Bank;

System of National Accounts 2008 prepared by the IMF, OECD, Eurostat, UN and the World Bank;

European System of Accounts 2010 prepared by Eurostat;

Methodological approaches to the assessment of housing services produced and consumed by homeowners in the system of national accounts, prepared by the CIS Statistical Committee;

ASA INVENTORY, Version 1.0 prepared by the Statistical Office of the Czech Republic;

Presentation by OECD expert Derek Blades "Estimating the services of owner-occupied dwellings: the user cost method" at the OECD, Ninth meeting, Geneva, 21-24 April 2008.

1. This Methodology uses the main concepts with the corresponding definitions according to the System of National Accounts 2008:

1) intermediate consumption (IC) - equal to the value of goods and services that are transformed or completely consumed in the production process in the reporting period;

2) deflator - an indicator that characterizes the average change in prices in the economy over a certain period;

3) gross value added (GVA) - the difference between the output of goods and services and intermediate consumption. This indicator includes the cost of fixed capital consumed in the production process;

4) gross output is the total value of goods and services produced in the economy in the reporting period;

5) gross domestic product (GDP) - one of the most important indicators of the system of national accounts, characterizing the final result of the country's economic activity;

6) an unincorporated enterprise - an economic unit - a producer of goods and services, which does not have a joint-stock form of ownership, is not a legal entity independent of its owner (household, government body or non-resident).

7) the nomenclature of commodity items to the classifier of individual consumption by purpose (NCICICP) - establishes the procedure for classifying and coding consumer goods and services;

8) physical volume index (PVI) - a relative indicator that characterizes the change in production volumes in the periods being compared. It is calculated by dividing the value of a certain indicator in the current period, valued at the prices of the base period, by its value in the base period;

9 ) consumption of fixed capital (CFC) is one of the most difficult indicators of the system of national accounts to measure , since it is not an aggregated value of a set of any economic transactions, but is an imputed value;

10) System of National Accounts (SNA) - a system of statistical indicators, built in the form of a specific set of accounts and tables characterizing the results of the country's economic activity.

1. **Theoretical aspects of the system of national accounts and the current practice of estimating the output of housing services produced by homeowners for their own consumption**
2. The production of housing services by homeowners for their own consumption (hereinafter - housing rent) has always been included in the production boundary in the national accounts. The ratio between owner-occupied dwellings and rented dwellings can vary significantly across countries, regions of a country, and even within short periods of time within the same country or region, and therefore international comparisons and comparisons in the time of production and consumption of housing services is distorted if estimates of imputed residential rent are not made. Under the system of national accounts, households that own the residential buildings or premises in which they live are treated as owners of unincorporated enterprises that produce housing services consumed by the same household (2008 CNA, para. 6.117).
3. The total imputed residential rent is shown as output, the inputs incurred as intermediate consumption, and the difference between the two, gross value added, as the gross income earned by the household as the owner of an unincorporated enterprise. The imputed value of residential rent is recorded in the national accounts as both the provision of services and the final consumption expenditure of homeowners (2008 CNA, para. 24.52).
4. If well-organized rental housing markets exist, residential rent should be valued at the prices of the same types of services sold on the market. This approach is in line with the general principles for the valuation of goods and services produced for own use. In other words, residential rent is estimated by using estimates of the rent that a tenant would pay for the same housing conditions, taking into account factors such as location, services in the surrounding area, and the size and quality of the dwelling itself. This approach is called the equivalent rent method or the stratification method.
5. Currently, in Kazakhstan, the assessment of residential rent is carried out by the method of stratification for the whole country, taking into account the available data sources.
6. According to the methodology of the System of National Accounts, the output of residential rent for the year was determined as follows, the total area of private property is multiplied by the average monthly rent per square meter, then the resulting value is multiplied by 12 months. The output is calculated using the following formula:

$$ O=H\* P\_{aver}\*12 (1)$$

where,

$O$**–** grossoutput of housing services produced by homeowners for their own consumption (million tenge);

$H$ **-** the total area of the housing stock of private ownership (million square meters);

$P\_{aver}$ **-** the average monthly price of housing rental (tenge per 1 sq. meter) .

The total area of the housing stock of private ownership used in the calculations is reduced by 10% of the total area of dwellings for empty or ownerless houses.

The average monthly rental price of housing is calculated as the average of the average monthly rental price of comfortable housing and the average monthly rental price of unfurnished housing (in tenge per 1 sq. meter) :

$$ P\_{aver}=((Σ P\_{12}^{b}/12 ) + (Σ P\_{12}^{n}/12 )) /2 (2)$$

where,

$P\_{}^{b} $ **–** Average rental price of comfortable housing per month (tenge per 1 sq. meter) ;

$P\_{}^{n}$– The average rental price of uncomfortable housing per month (tenge per 1 sq. meter) .

Due to the fact that information on the housing stock is available only on an annual basis, when calculating the gross output for 1 quarter, 6 months and 9 months, data on newly commissioned housing for the indicated reporting periods are used. The total area of the housing stock of a private form of ownership is determined by summing the total area of the housing stock for the previous reporting year and the total area of newly commissioned housing.

1. The source of information for calculating the output is the collection "On the housing stock of the Republic of Kazakhstan", bulletins "On the implementation of construction work and commissioning of facilities in the Republic of Kazakhstan" and "Prices in the housing market in the Republic of Kazakhstan".

A practical calculation of the issue of residential rent for 2014 is given in Appendix 1 to this Methodology.

1. **International recommendations for an alternative assessment of housing services produced by homeowners for their own consumption**
2. The procedure recommended by the SNA for estimating the housing rent of owner-occupied dwellings is to assume that the rent that would be paid for that dwelling is equal in amount to the amount actually paid for similar dwellings. However, standard procedures are not always applicable.
3. In 2008, at the joint UNECE/Eurostat/OECD meeting on national accounts in Geneva, a paper by OECD expert Derek Blades was presented on the valuation of citizen-owned housing services using the user cost method. This report details the calculation algorithm and formulates the following criteria according to which the user cost method should be applied:
4. less than 25% of all dwellings available in the country are actually rented out;
5. over half of the rented housing is rented by foreigners who pay high rents, or government employees or other workers who pay low rents;
6. rental housing is distributed unevenly across the country.

In 2010, OECD experts presented a new, revised version of the methodology, in which the criteria for applying the user cost method are formulated as follows:

1. less than 10% of housing is privately rented;
2. the difference between the rent paid for living in private and public housing is more than 3 times.
3. The user cost method estimates each of the costs that homeowners would have to take into account when setting a market rent if they chose to rent their home to other residents rather than live in it themselves. Such expenses are:
4. intermediate consumption;
5. other taxes on production;
6. consumption of fixed capital;
7. profit and related income.
8. According to the results of the 2009 census, out of the total population of the country that indicated the place of permanent housing, 91% of the population had their own housing (1999 - 95%), about 5% lived in rented premises and 1.9% - in state institutions or premises, owned by individuals and companies (legal or natural persons).
9. In 2014, according to the annual “Questionnaire for the main interview” (form index D 006, periodicity - annual), 94% of households lived in their own housing, 5.4% in rented housing, 0.6% in housing owned by public institutions or private companies.
10. **Evaluation of housing services produced by homeowners for their own consumption**
11. The Committee carried out experimental calculations of residential rent using the user costs method.

The user cost method estimates each of the costs that homeowners would have to take into account when setting a market rent if they chose to rent their home to other residents rather than live in it themselves. Expenses include the following items:

1. intermediate consumption;
2. other taxes on production;
3. consumption of fixed capital;
4. profit and related income.
5. Intermediate consumption includes the value of goods and services consumed as inputs in the production process that are either transformed or fully utilized in the production process.

It is necessary to distinguish between the costs of tenants and homeowners. According to the 2008 SNA, the expenses incurred by tenants are more often of a routine nature and are classified as final consumption expenditures. Expenditures that are considered the responsibility of homeowners should be considered as intermediate consumption associated with the production of housing services. Such expenses include decoration, minor repairs and maintenance of dwellings. These costs consist either of payments for services rendered by professional builders or decorators or purchases of materials for self-repair and decoration of dwellings (SNA 2008, 9.67).

Expenses for major improvements (i.e. renovation, renewal or expansion) of dwellings are not classified in the same way as expenses for decoration, minor repairs and maintenance. Such expenditure is not included in household final consumption expenditure but is reported as gross fixed capital formation of the owners of such dwellings, including owner-occupants (2008 SNA, 9.68).

1. The source of data for the formation of intermediate consumption is the "Quarterly Questionnaire on Household Expenditures and Income" (form index D 004, frequency - quarterly). Appendix 2 to this Methodology reflects the items of expenditure included in intermediate consumption.
2. Other taxes on production include all taxes, other than taxes on products, that are payable by enterprises as a result of their participation in production. The object of taxation is land, fixed assets or labor used in production.
3. According to the 2008 SNA, homeowners are producers of housing services consumed by themselves, then other taxes on production are taxes on property (real estate) paid by homeowners.
4. According to Article 405 of the Tax Code of the Republic of Kazakhstan dated December 10, 2008 No. 99-IV, the object of taxation on the property of individuals are dwellings, buildings, summer cottages, garages and other buildings, structures, premises located on the territory of the Republic of Kazakhstan, garages and other buildings, structures, premises belonging to them on the right property, as well as objects of construction in progress from the date of residence, operation.
5. The calculation of residential rent includes a tax on housing, a tax on summer cottages, garages and others are excluded from the calculations. Due to the fact that at present it is impossible to distinguish between property taxes by types of property, 90% of the total amount of property tax for individuals is estimated to be included in the calculation of residential rent.

Also, the calculations take into account the land tax from individuals on the land of settlements.

The source of information is the "Report on the execution of the state budget of the Republic of Kazakhstan" of the Ministry of Finance of the Republic of Kazakhstan.

1. The consumption of fixed capital is recommended to be calculated using the perpetual inventory method. For this method, it is necessary to have a long time series of data on real estate, service life, and others.

Due to the lack of such data, the calculation of fixed capital consumption was carried out by an alternative method proposed by international experts.

1. First of all, net capital stocks are calculated using the price-quantity method. Taking into account the available data, the calculations were carried out in a breakdown of the housing stock into 2 types - urban and rural areas. For an urban settlement, the resale price of comfortable housing is applied, for a rural settlement - the resale price of uncomfortable housing.

$$ ЧКЗ=\left(H\_{1}\* P\_{1}\right)+ \left(H\_{2}\* P\_{2}\right) (3)$$

where,

$H\_{1}$– urban housing stock;

P 1 - the resale price of comfortable housing;

H 2 - rural housing stock;

P 2 - the resale price of uncomfortable housing.

1. To obtain gross capital reserves, we calculate the depreciation rate. On the recommendation of international experts, the calculation is carried out on the basis of the ratio of prices per square meter of new apartments and apartments in the secondary sector.

$$ НА=\frac{P\_{aver}^{s}}{P\_{new}} (4)$$

where,

$НА$- depreciation rate ;

$P\_{aver}^{s}$- the average monthly selling price of comfortable and uncomfortable housing (tenge per 1 square meter) ;

$P\_{new}$- the average monthly selling price of a new home.

Gross capital stock is defined as the ratio of net capital stock to the depreciation rate.

$$ ВКЗ=ЧКЗ / НА (5)$$

where,

$ВКЗ$– gross capital reserves;

$ЧКЗ$– net capital reserves;

$НА$- depreciation rate.

1. Consumption of fixed capital is defined as the ratio of gross capital stock to the average life of a dwelling. The average life of a dwelling is the number of years that a dwelling should last from the year it was built until the building is demolished. The assessment of the service life of buildings depends on the characteristics of the building, on the material of the walls. According to the recommendations of international experts, the lifetime of the dwelling is used in the calculations: for houses 90 years; for apartments 80 years.

$$ПОК=ВКЗ / СС (6)$$

where,

$ПОК$– consumption of fixed capital;

$ВКЗ$– gross capital reserves;

$СС$- life time.

1. Profit and related income. People acquire capital property because the net return they expect to receive from it is at least as high as the percentage they could earn by investing in financial assets. This logic works regardless of what kind of capital property it is - a building, a car or, in this case, a dwelling. The UNECE proposes to use a standard annual rate of return of 2.5%. Many EU countries use this rate of return when calculating residential rent using the user cost method. Profit and income equivalent to it are calculated as multiplying 0.025 by net capital reserves.

$$П=ЧКЗ\*0,025 (7)$$

where,

$П$- profit and income equivalent to it;

$ЧКЗ$- Net capital stock.

1. Gross output of residential rent is calculated as the sum of all cost components:
2. intermediate consumption ( $ПП$);
3. other taxes on production ( $Н$);
4. consumption of fixed capital ( $ПОК$);
5. profit and income equivalent to it ( $П$).

Gross output calculations were made for the entire area of private housing stock. Therefore, in order to avoid double counting, we subtract from gross output the actual rent ( $ФА$) paid by tenants to registered legal entities and individual entrepreneurs engaged in real estate transactions. The source of data on the actual rent is the national statistical observation "Report on the volume of services rendered" (form index 2-service, frequency - quarterly).

$$ВВ=\left(ПП+Н+ ПОК+П\right)- ФА (8)$$

Calculations based on the user cost method are given in Appendix 3 to this Methodology.

1. The Committee also carried out experimental calculations using the stratification method. The difference between this calculation and the current practice of calculation is that the current practice is carried out in the country as a whole, and then distributed by regions using the “top-down” method. While the experimental calculations were carried out using the “bottom-up” method, the calculations were carried out primarily for the regions, then data were obtained for the whole country.
2. The calculation of residential rent by the stratification method involves such data as the price of housing rent and the total area of the housing stock of private property. The rental price of housing depends on the location of the home, on its size and quality, so it is recommended to make calculations taking into account all these influences. Due to the fact that the Committee currently has data only on the rental price of two types of housing, comfortable and unfurnished, the calculations were made using the available data. Calculations were carried out separately for the housing stock of an urban settlement using the rental prices of comfortable housing, the housing stock of a rural settlement - rental prices for unfurnished housing.

Residential rent is calculated by the stratification method for each region separately as follows:

$$ ВВ^{r1}=Н\* P\_{aver}^{r1}\*12 (9)$$

where,

$ВВ^{r1}$– gross output of residential rent in region No. 1;

H - the area of the housing stock of private property in region No. 1;

$P\_{aver}^{r1}$- the average monthly rental price of housing in region No. 1.

Calculations of residential rent by the stratification method are given in Appendix 4 to this Methodology.

1. Appendix 5 to this Methodology contains a comparative table with the results of experimental calculations using the user costs method, the stratification method with current calculations.

Taking into account that there are no separate data for the calculation of residential rent by the user costs method, and some assumptions were made in the experimental calculations, the calculation of residential rent by the stratification method is currently more acceptable. Work to improve the calculation of residential rent will continue, both in terms of the calculation methodology itself and in terms of the statistical information used in the calculations.

1. **Calculation of residential rent in constant prices**
2. It is necessary to carry out calculations of residential rent in constant prices. The calculations use the index of change in the area of the housing stock of private property in the current period relative to the corresponding period of the previous year.

$$I\_{h}= H\_{t} / H\_{t-1}\% (10)$$

where,

$I\_{h}$- index of physical volume (%) of the area of the housing stock of private ownership;

$H\_{t}$**-** the total area of the housing stock of private ownership for the period t (thousand square meters);

$H\_{t-1}$ **-** the total area of the housing stock of private ownership for the period t - 1 (thousand square meters);

International experts recommend making the assumption that the quality of newly commissioned housing and secondary housing (due to current and major repairs) improves by 1% annually:

$$I\_{r}= I\_{h}\*1,01 (11)$$

where,

$I\_{r}$– index of physical volume (%) of residential rent.

The GVA of residential rent at constant prices is calculated by extrapolating the GVA of residential rent in the base period to the volume index of the GVA of residential rent.

$$GVA\_{const}= GVA\_{t-1 }\* I\_{r} (12)$$

where,

$GVA\_{const}$. – GVA of residential rent at constant prices;

$GVA\_{t-1 }$ – GVA of residential rent in the base period.

The deflator is calculated using the following formula:

$$D= GVA\_{t} / GVA\_{const} (13)$$

 Appendix 1

 to the Methodology for assessing residential rent

**Table 1. Calculation of the issue of residential rent for 2014**

 million tenge

|  |  |  |  |
| --- | --- | --- | --- |
| Name |  | year 2013 | year 2014 |
| The total area of the housing stock of a private form of ownership, m 2 | 1 | 299 609.1 | 331,996.3 |
| Average monthly prices in the housing market, in tenge per 1 sq. meter | 2 = (3 + 4) / 2 | 817.4 | 932.3 |
| Comfortable housing rental | 3 | 1042.2 | 1,196.2 |
| Rent of unfurnished housing | 4 | 592.5 | 668.3 |
| The total area of the housing stock of a private form of ownership, excluding 10% of empty and dilapidated housing, m 2 | 5 = 1 - (1\*10%) | 269 648.2 | 298 796.7 |
| Residential rent for 1 month, thousand tenge | 6 = 5 \* 2 | 220 410.4 | 278 568.2 |
| Gross output of "Residential rent" for the year, million tenge | 7 = 6 \* "12" | 2,644,924.8 | 3,342,818.4 |
| Share of intermediate consumption in gross output, % | 8 | 10.2 | 24.1 |
| Intermediate consumption, million tenge | 9 = 7 \* 8 | 269,058.8 | 806 775.5 |
| Gross value added, million tenge | 10 = 7 - 9 | 2,375,866.0 | 2,536,042.9 |

 appendix 2

 to the Methodology for assessing residential rent

**Table 2. Expenditure Items Included in Intermediate Consumption**

|  |  |  |
| --- | --- | --- |
| №№ | NKIPTs | Name |
| E1 | 0431 | Materials for the maintenance and repair of residential premises |
| 22 | 0432 | Residential maintenance and repair services |
| 33 | 0444 | Other services related to the maintenance of residential premises, n.e.c. |
| 44 | 0511 | Furniture and household items |
| 65 | 0512 | Carpets and other floor coverings |
| 66 | 0520 | Textiles used in the household |
| 77 | 0530 | Appliances |
| 88 | 0540 | Glassware, cutlery and household utensils |
| 99 | 0550 | Tools and fixtures used in everyday life and gardening |
| 110 | 0561 | Non-durable household goods |

 Appendix 3

 to the Methodology for assessing residential rent

**Table 3. Calculation of residential rent using the user cost method**

million tenge

|  |  |  |  |
| --- | --- | --- | --- |
| №№ | Name | year 2013 | year 2014 |
| e1 | Intermediate consumption | 211 209.1 | 221 728.0 |
| 22 | Consumption of fixed capital | 737 689.9 | 867 889.9 |
| 33 | Other taxes on production | 5463.7 | 8356.2 |
| 44 | Net operating income | 1,054,659.5 | 1,299,849.6 |
| 55 | Total, (output=1+2+3+4) | 2,009,022.1 | 2,397,823.7 |
| 66 | Actual rent | 80 494.0 | 118,434.6 |
| 77 | Gross output of residential rent, (7 = 5-6) | 1,928,528.1 | 2,279,389.1 |
| 88 | Gross value added, (8 = 7-1) | 1,717,319.0 | 2,057,661.1 |

 Appendix 4

 to the Methodology for assessing residential rent

**Table 4. Calculation of residential rent by the stratification method**

million tenge

|  |  |  |  |
| --- | --- | --- | --- |
| №№ | Name | year 2013 | year 2014 |
| e1 | Gross output | 3,885,108.4 | 4,605,285.5 |
| 22 | Intermediate consumption | 211 209.1 | 221 728.0 |
| 33 | Other taxes on production | 5463.7 | 8356.2 |
| 44 | Gross value added (4 = 1-2) | 3,673,899.3 | 4,383,557.5 |

 Appendix 5

 to the Methodology for assessing residential rent

**Table 5. Comparative table of residential rent calculations**

. tenge

|  |  |  |  |
| --- | --- | --- | --- |
| NNo No. | Name | Experimental calculation | Calculation by the current method |
| year 2013 | year 2014 | year 2013 | year 2014 |
| Custom cost method | Stratification method | Custom cost method | Stratification method |
| e1 | Gross output | 1,928,528.1 | 3,885,108.4 | 2,279,389.1 | 4,605,285.5 | 2,644,924.8 | 3,342,818.4 |
| 22 | Intermediate consumption | 211 209.1 | 211 209.1 | 221 728.0 | 221 728.0 | 269,058.8 | 806 775.5 |
| 33 | Gross value added | 1,717,319.0 | 3,673,899.3 | 2,057,661.1 | 4,383,557.5 | 2,375,866.0 | 2,536,042.9 |
| 44 | IPV, % |  |  | 101.9 | 101.9 |  |  |
| 55 | Deflator, % |  |  | 117.6 | 117.1 |  |  |