



Perfection of the Methodology of Earnings Statistics in the Russian Federation

Elena V. Zarova

“Analytical Centre” by Government of Moscow,

Plekhanov Russian University of Economics,

Moscow, Russia

zarova.ru @ gmail.com

Abstract

The current scientific problem and practical task of official labor statistics is the use of a combination of various information sources, such as survey data from organizations, sample surveys of the population, censuses, to obtain reliable information on earnings in the formal and informal sectors of the economy. The development of national labor statistics in this direction is indicated by the methodological recommendations of the International Labor Organization.

In Russia, these ILO recommendations [1] have been taken into account when developing a new earnings indicator for all categories of employees in the economy of regions and countries in general. Until 2016, the wage indicator in the Russian Federation was calculated only by organizations. The article is devoted to the evaluation of the new earnings index, its sporting moments and proposals for improvement.

Keywords: earnings, wage, employee, statistical reporting of organizations, survey of household incomes, population survey, sample.

1. Introduction

The Federal State Statistics Surveys of Russia (Rosstat) in 2016 for the first time published a new indicator of earnings statistics (according to data for the reporting year 2015) - the average monthly earnings of employees in organizations, individual entrepreneurs and individuals. This indicator reflects for Russia and the regions of the Russian Federation the accrued earnings at the main place of work, including taxes and other deductions in accordance with the current Russian legislation.

Unlike the earnings indicator in organizations, which was the main of official earnings statistics in Russia until 2016, the new indicator characterizes the payment of hired workers "in the economy as a whole", i.e. taking into account the results of work in the formal and informal sectors of the economy. Development and introduction into Russian official statistical practice of the Methodology for calculating a new indicator is an important "step" in the way of improving the methodology of wage statistics not only at the Russian, but also at the international level.

2. New official method of earnings statistics in Russia

The calculation of earning statistical indicator is based on two important requirements of the international standards of labor statistics, concentrated in the Resolution of the 19th International Conference of Labor Statisticians [1]:

- 1- including into statistical assessments of employment the aggregate records of persons engaged in work in the formal and informal sectors of the economy;
- 2- usage of different sources of statistical data (labor force surveys, specialized household surveys, administrative data, censuses) as complementary information resources in combination with each other in order to obtain comprehensive statistical data.



Taking into account the above-mentioned requirements, the calculation of the indicator "Average monthly average monthly earnings of employees in organizations, individual entrepreneurs and individuals" was based on three data sources:

1. Mandatory official reports of large, medium, small and micro organizations for Rosstat : for all large and medium-sized organizations and on sample basis for small business
2. Observational data of Labor Force Surveys (LFS)
3. The results of assessing the indicators by data of Sample Statistical Survey of Income (SSSI)

Calculation of the average monthly earnings in accordance with the above Methodology is carried out in three categories of employees:

- 1- by legal entities;
- 2- working under contracts of a civil-law nature;
- 3- for individual entrepreneurs and individuals).

This indicator is a quotient from the division of the corresponding indicators of the wage monthly fund and the number of employees of this categories.

For this purposes, the wage fund is defined as the product of the average hourly earning indicator by the amount of time paid.

The results of assessing the indicators by data of Sample Statistical Survey of Income (SSSI) is the only source of data on the average hourly wages in Russia and the Russian regions. The data of official forms of statistical reporting of organizations and the results of the LFS are used for the determination of employees number and their amount of paid time.

3. Information and methodological problems of the new methodology and ways to solve them

In our investigation aimed to the developing of the Methodology, the question of the representativeness of the data of the SSSI for 2015 on employees at the regional level of the Russian Federation has been decided. This survey involved 60 thousand households, which is 0.11% of the total population in Russia as a whole. As a result of the performed calculations, it was established that the aggregate of employees observed by the SSSI at the regional level of the Russian Federation, are significantly biased in terms of the structure of activities (by SNA 2008 [2]) relative to similar aggregations observed in the LFS (which includes 0.76% of the Russian population of the corresponding age).

In order to ensure the representativeness of the average monthly earnings data of employees for the year 2015, Rosstat adopted a working hypothesis on the uniqueness of the distribution characteristics for the Russian regions of the average monthly earnings of employees of organizations and the average hourly wages of employees of all categories. The realization of the hypothesis was provided through the "spreading coefficient".

The application of the "spreading coefficient", was a forced measure with a limited sample size of the SSSI for the reporting year 2015 (60 thousand households). This raised two theoretical questions:

- 1-Is it possible to consider as justified the use of the "spreading coefficient" calculated from the data of organizations' reports to estimate the average hourly wages of employees in the informal sector of the economy (for individual entrepreneurs and individuals)?
- 2 – is it correct to applicate the "spreading coefficient", calculated from data on the average monthly earnings , for estimating the average hourly wage?

In 2017 (according to data for the reporting year 2016), Rosstat conducted a survey of the population's incomes for an extended sample of 160,000 households [3]. Based on the results of my calculations, the level of representativeness was sufficient (at 95% probability) for seventy-two Russian regions for the category of employees from legal entities and for forty Russian regions in terms of category of employees of individual entrepreneurs and individuals.

We proposed to include in the Rosstat methodology an "adaptive" algorithm that takes into account both "direct" SSSI data and organization reporting data for determining the average hourly wage by



categories of employees [4,5]. These proposals were supported by experimental calculations and were approved by Rosstat at its Scientific and Methodological Council in April 2017.

Another our proposal for the improving of the described Methodology, which provides for an increase in the accuracy of estimates of the average monthly earnings due to the fuller use of the most reliable source of information in Russia - official statistical reporting of organizations - is the division of the number of employees from legal entities into two subgroups: a) presented in reporting of organizations (on them all the necessary information is taken from the official statistical reports); b) non-presented organizations (for this group information sources are SSSI and LFS data).

4. Further investigation

A number of methodological tasks for improving the methodology for calculating the average monthly earnings of employees in organizations, individual entrepreneurs and individuals are still subject to solution.

The most important of them are the following:

- 1- the need to develop algorithms for "re-weighting" SSSI data on the "current" demographic structure and subsequent alignment of the microdata structure of the SSSI and LFS (the need for this algorithm is justified by the fact that the distribution of sample LFS data uses a demographic structure at the beginning of the year preceding the reporting year, i.e. with a significant lag of delay);
- 2- the formation of a methodology for recording labor migrants (including foreign ones) as part of employees on the basis of a more complete use of administrative sources (in the current methodology, data on labor migrants are used without taking into account the time of their stay on the territory of the subject of the Russian Federation);
- 3- harmonization of the structures of sample observational data SSSI and LFS, as well as on administrative sources on the basis of criterion for minimizing the error of sample data distributed to the general population.

5. Conclusions

Outlined in the article proposals for further improvement of the methods of calculating the average monthly earnings of employees in organizations, individual entrepreneurs and individuals will have important theoretical and applied importance for the development of earnings statistics both at the Russian and international levels.

References

- ILOSTAT - <https://www.ilo.org>
 System of National Accounts 2008. ISBN 978-92-1-161522-7. - European Commission International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank., New York, 2009
 Rosstat data –www.gks.ru
 Laikam K/E , Zainullina Z.Zh., Zarova E.V. (2016) Methodology for calculating average monthly wages. - Voprosy Statistiki / Scientific and Information Journal, #7, 2016, pp. 52-56.
 Zarova E.V., Musikhin S.N., Smelov P.A.. (2016) Statistical resources and methods for forecasting wages of employees indicator. - Voprosy Statistiki / Scientific and Information Journal, #12, 2016, pp. 19-28.