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DEVELOPMENT OF STATE STATISTICS

THE SOCIO-DEMOGRAPHIC SURVEY (MICROCENSUS OF POPULATION) IN 2015

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The review describes the preparatory work for the Federal statistical observation of «Socio-demographic survey (microcensus of population)», which is scheduled to be held in October, 2015. The regulatory and legal documents related to carrying out the 2015 microcensus of population (hereinafter referred to as the MCP-2015) are listed; it is also indicated that in preparing the programme for the MCP-2015 were used the United Nations Recommendations for Population and Housing Censuses as well as the census experience of 1994 microcensus of population and Russian population censuses of 2002 and 2010.

The author states that the MCP-2015 Programme provides questions to get core demographic characteristics of the population related to relationships between the members of the household (to establish indicators, describing households and family units, for the microcensus of population), their sex, age and place of birth. The data will be collected on the usual language spoken by the respondent in his or her everyday life: at home, work or when studying. The aim is to get not only ethnic characteristics of the population, but acquire more detailed information on the migration processes. More attention will be focused on improving information on health conditions of a population and educational attainment.

It is emphasized that within the batch of indicators reflecting the economic aspects of life of the population, the is a set of indicators on economic activity and means of livelihood (as well as in the 2010 Russian population census), however questions on the status in employment, location of work, economic activities and employment are not included in the MCP-2015 Programme, due to the fact that this information is collected by regular employment population surveys. Special attention is paid to the testing of new methods to collect information on households and their members in the Russian population census and issues of technical support of the MCP-2015.

Keywords: Rosstat, population census, socio-demographic survey (microcensus of population - MCP-2015), international recommendations, MCP-2015 Programme, organizational and technological support of the MCP-2015.

JEL: C80, C81, C82.

METHODOLOGY

ECOSYSTEM ACCOUNTING AS A FUTURE DEVELOPMENT OF THE SYSTEM OF INTEGRATED ENVIRONMENTAL AND ECONOMIC ACCOUNTING AND SNA

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This article describes conceptual, statistical and methodological aspects of the ecosystem accounting. The referenced research was performed using the latest recommendations from the leading international organizations, a number of Russian sources as well as experience gained by the authors of this publication in this field in recent years. In particular, the considered accounting system is a direct continuation and development of the System of National Accounts (SNA) and the supporting System of Environmental-Economic Accounting (SEEA).

Creating an ecosystem accounting is possible on the basis of interrelated and integrated approach to statistical estimates of the natural environment with due regard to target characteristics of the ecosystem, service flows rendered by ecosystems to economic activity, as well as to a human being. In addition, this provides a parallel and/or criss-cross analysis with binding biological and other characteristics of ecosystems to economic activity at the macro level, with a reflection of their mutual influence on each other. Characteristically, a particular feature of the ecosystem accounting is disclosing elements of the non-market activity related to ecosystems, and integrating the obtained information in a single set of data on market transactions. The capacity of the abovementioned accounting system to be used to supply the interested authorities with full and comprehensive macrostatistical information concerning the economic parameters of ecosystem assets, ecosystem services, the depletion/degradation and renewal/restoration of ecosystems, benefits (income, etc.) and other macrocharacteristics is argued and thoroughly substantiated.

In the course of the research were extensively reviewed and evaluated the following two documents prepared by the United Nations Statistics Division, as well as the European Commission, the Organization for Economic Co-operation and Development, etc.: a) SEEA Central Framework, adopted by the United Nations Statistical Commission in 2012 and established as an international statistical standard; and b) the System of Environmental-Economic Accounting 2012: Experimental Ecosystem Accounting, published in 2013. The authors of this article initiated and carried out their own translation of the two mentioned documents into Russian.

The article critically analyzes the basic concepts and definitions proposed by international organizations in the field of ecosystem accounting, composition and structure of statistical observation units. The authors elaborate tasks and describe methods for the evaluation of ecosystem assets and ecosystem services, the linkage of statistical data in physical and monetary terms. The preparation of generalized accounts of ecosystem services based on the principles outlined in the SNA-SEEA and with maximum exception of double-counting are studied separately. In addition the authors attempt to establish not only the importance of described macrostatistical constructions but also the practical possibility for future implementation of elements of the ecosystem accounting in the Russian Federation. The final part of the article presents brief conclusions and recommendations on information and methodological support of the ecosystem accounting at the state level in our country.

Keywords: ecosystem accounting, System of Environmental-Economic Accounting (SEEA), ecosystem assets and services, benefits, units of ecosystem accounting, valuations of ecosystem assets and services, ecosystem accounts.

JEL: C82, E01, F64, Q2, Q50.

STATISTICS IN SOCIO-ECONOMIC STUDIES

DIGITAL DIVIDE AS A NEW FACTOR OF SOCIAL STRATIFICATION

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In this article on the basis of statistical methodology is explored the influence of informatization on socio-economic processes. In particular, from this perspective is examined the phenomenon of digital divide, that is affecting the fabric of society and modern social stratification. The authors provide brief overview of the national progress in that area. The classification of users of information and communication technologies is discussed, assessment and qualification template for respondents is proposed as a tool for analysis. The template makes it possible to describe the preparedness of users to the information society, their involvement in the digital environment and their performance in it, and to divide them into masters, professionals, advanced, competent, first time users and nonusers.

In order to build a computational stratification model of society the authors propose the «Matrix of social identification of the individual». Compiling this matrix with the maximum possible values of indicators and their subsequent processing allows designing a schematic model of the stratification system of society. Despite the fact that such a model can not be considered complete (it is impossible to obtain data on the size of each stratum of society - it provides only the average breakdown by strata), on its basis and due to estimation procedures - without any specific large-scale surveys - can be constructed a reasonable enough social stratification scheme.

Keywords: statistical methodology, digital divide, information inequality, social stratification model, assessment and qualification template, social identification matrix.

JEL: C10, D83, I31.

ECONOMIC ACTIVITY OF THE ELDERLY PEOPLE IN RUSSIA: FOLLOWING THE GLOBAL TREND?

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The article addresses the dynamics of the economic activity of elderly people in Russia in the context of global trends on the basis of data from the Federal State Statistics Service, the International Labour Organization, the International Monetary Fund and several national statistical offices.

The problem of ageing population, typical for almost all countries, including Russia, in the coming decades will be a major challenge to their economic growth. The research demonstrates that the aging of the workforce in Russia is as a result of the aging of the population and the increase in the level of economic activity of the elderly people. As the author notes, a similar trend is observed in many developed countries. However in the developing countries the economic activity of the elderly has been decreasing in the last decades. Aging of the workforce in the Russian Federation, along with its reduction, while maintaining the total population, raises the question of sustainability of the pension system. The author considers the people of retirement age as a provision to increase employment and to mitigate the negative effects of the population aging.

Based on the study of the dynamics of economic activity of the elderly people in Russia in 1995-2012, their contribution to the overall aging of the labor force in the period of time under review is estimated. A comparative analysis of the influence the level of economic development has on the dynamics of the economic activity of elderly people in the developed and developing countries has allowed the author to predict the direction and extent of the most likely changes in the economic activity of elderly people in Russia up to 2030.

Keywords: employment statistics, demographic statistics, econometric analysis, population aging, pension behavior, economic activity of the elderly people.

JEL: J11, J14, J26

APPLICATION OF LIFE TABLES AND COX REGRESSION TO THE ANALYSIS OF INTERNSHIPS DONE BY YOUNG PROFESSIONALS

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In the article on the basis of official statistical data (Federal State Statistics Service - Rosstat) as well as data from the major research centers (Superjob.ru, HeadHunter) on the level of unemployment among university graduates are analyzed labor market trends in its currently most promising segment - young professionals. Positioning of a young professional in the labor market is considered from the perspective of improving his or her competitiveness. Taking into account the results of statistical analysis, are described the advantages and disadvantages of internships for young professionals from the perspective of both the employer and the candidate for the vacancy.

The authors paid special attention to the methodological aspects of survival analysis and applying the Cox regression to the study of the processes occurring in the labor market of young professionals. Analysis results of the data on the internship at a major international company are presented. Processing of the initial data array was made using the IBM SPSS Statistics application package.

At the first stage the authors present an analysis of the sampling frame. After that are constructed and interpreted life tables and survival curves, is analyzed the dynamics of candidate withdrawals and probability distribution for withdrawals among trainees before the probationary period is over, depending on the qualification (degree) of education. The results are interpreted according to the influence of various factors on successful completion of the internship. Based on these results, the authors provide preliminary recommendations, which can be used by those companies, which create internships for young professionals, to increase the effectiveness of internship completions. By applying these recommendations companies will be able to get high quality long-term employees, and professionals - a good place to work.

Keywords: labor market statistics, education, training (probation), trainee, life tables, censored data, survival function, Cox regression.

JEL: C34, J24, M53.

INTERNATIONAL STATISTICS

PURCHASING POWER PARITIES IN EUROPE - REFLECTIONS ON USES, RECENT DEVELOPMENTS AND THE FUTURE OF THE INTERNATIONAL COMPARISON PROGRAM*

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Purchasing Power Parities (PPPs) play a key role in comparative analyses. There is one important specific use of PPPs in the EU: the financial support to the economic development of regions (a large part of the EU budget) is determined partially by the regions' per-capita GDP in PPP terms. This, to some extent, has driven the development of the European PPP program.

Another use of PPPs is the analysis of price convergence; in this context the article considers a computation of Price Level Indexes at fixed exchange rate.

The article also describes recent and forthcoming developments in the Eurostat PPP program, including such issues as comparing education and health, implementation of European System of Accounts (ESA) 2010, introducing a new basic heading classification, reorganisation of the consumer goods price surveys and the

development of PPPs for industries.

The article argues in favour of keeping the regional approach for the International Comparison Program (ICP) and the need to strike the right balance between autonomy for a region and its adherence to globally agreed methodologies.

Keywords: purchasing power parities, Eurostat, OECD, international comparison program, price level indices, price convergence.

JEL: E01, E31.

* This article was presented at the Workshop on Inter-Country and Intra-Country Comparisons of Prices and Standards of Living, held in September 2014, Arezzo, Italy.

SCIENTIFIC REPORTS

DEVELOPMENT OF THE MODEL TO MEASURE EFFECTIVENESS OF THE 2020 RUSSIA POPULATION CENSUS RESULTS

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Russia population census is the main source of the official statistical information on the population size and structure. Increased necessity for collecting and using the high-quality and reliable statistical information for different users and the shortcomings of the existing algorithms and methods for measuring efficiency of the census results enhance the usefulness of determining the new alternative approaches to increase census effectiveness based on the use of modern information processing technologies, as well as on the evaluation of quality of the statistical information. Classification of errors emerging in census-taking and technology for processing census materials play an important role.

The article presents the author's classification of errors that occur at all stages of the census, wherein the quality of statistical information is interrelated with the quality of the statistical survey. To assess the quality of information is proposed the use of confidence intervals concept, within which the exact meaning of the analyzed indicator with a given probability lies. The resource method is used to create a model for measuring the efficiency. When defining the indicators to measure effectiveness of the census results, probable error should be compared with the assumed resources received during the use of different measurement parameters. The theory of fuzzy sets, which is based on the function of element membership to the set and can take any value in the range [0 - 1], is applied. This fact allows defining of the fuzzy concepts, such as qualitative information, less qualitative and low-quality information, etc.

The developed model for measuring effectiveness the 2020 Russia Population Census with due regard to the quality of the obtained information will allow to classify all possible types of errors, depending on the stage of the census, to identify the sources of an error and to evaluate the error according to the given level of reliability and quality of the final statistical information on the basis of the resource approach.

Keywords: census, effectiveness, evaluation model, 2020 Russia Population Census, information technologies, classification of errors, quality and reliability of statistical information, resource approach.

JEL: C61, C82, C89.