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ESTIMATION OF A LIVING STANDARDS OF ELDERLY POPULATION IN THE CONDITIONS OF TRANSITION TO THE SUSTAINABLE DEVELOPMENT IN AZERBAIJAN REPUBLIC

Introduction. Our country as the all world community has passed to new type of the development, allowing to satisfy requirements of present generation without a damage of interests of the future generation. The term “*sustainable development*” connects problems of the environment protection, stabilization of economy and improvement of quality of a life of all social classes, particularly older persons.

How the process of ageing of the population influence on sustainable development? The analysis of these problems is considered in this paper. Here emerge the question: How this growth is influenced the living standard of a society, and especially the most unprotected part of community – older persons? On the other hand, we observe a process of ageing of the population in our country as well as all over the world. Will the process of ageing of the population slow down economic growth? The analysis of these problems is considered in this paper.

Methods and data. For researching on the basic demographic tendencies, indicators of ageing, quality of the life elderly we use the methods of the descriptive statistics, econometrics and program Eviews. Material: Data set of monitoring the households is spending annually by the World Bank and the State Statistical Committee of Azerbaijan Republic.

Demographic ageing of the population – increasing a share of elderly and old people in population structure – twenty years ago considered as the phenomenon observing only in the developed countries, today is observed all over the world. This process has various aspects, which are necessary for considering by working out of social programs. Population ageing already today are shown in all areas of community life. Experts predict, that this process will influence on the economic growth, savings, investments and consumption, labor markets, pensions, the taxation etc.

So, in the near future population ageing can lead to annual falling of rates of economic growth, deficiency of a labour, and payment of pensions becomes serious loading for the government.

In Azerbaijan acceleration of demographic ageing of the population has coincided by time with the period of the economic reforms. In this situation elderly have appeared among those categories of citizens which have suffered in the social plan most of all. It was most difficult to older persons to adapt to changing social-economic conditions. World financial crisis more has worsened this process. Though Azerbaijan is weakly integrated into world economic, especially in sphere of finance, but our country develops the economy in the conditions of globalization and fluctuation of currencies. The budget of the country which is filled up in basic by oil incomes, also has suffered from changing oil prices. First of all government programs have suffered in social sphere. Some problems connected with employment have emergences, especially among older persons. The world economic crisis has led to the further differentiation of a society, including among older persons. In this connection there is a question: How to estimate quality of a life of the elderly population in our Republic during ageing of the population which are taking place all over the world.

The analysis of dynamics of the basic demographic indicators in our country shows that with increasing of life expectancy growth of a share of the elderly population. By the opinion of the most demographers if the number of the elderly population makes more than 7% from the total number it is shows the population So, if in 1990 year the share of persons aged 60 and over emerged 8.%, in 2000 – 8.5% and in 2015- 8.8% in total number of the population (women – 9.9%, men – 7.7%).

Characteristic of the of ageing in Azerbaijan consists from two factor : decrease in birth rate and life expectancy growth. Decrease in level of birth rate has led to reduction of relative density of children in a population and therefore growth of relative density of the elderly population. At the same time structural changes in the given group of the population are observed. In 1989 year among population of working age the number of people in group age 15-29 year was 47,6%, in group age 30-49 year was 32,8% and in older group 50-64 year – 19,6%. But in 2015 these indicators are 1.6%, 42.4%,

16.0%. It is necessary to notice also, that the growth of elderly population in urban places higher than the growth of rural population. Especially fast growth is observed in age group from 70 and is more senior, and also dominance of number of women over number of men. According to forecasts, by 2050 year share of population elder 50 will increase up to 20%. The coefficient of demographic support elderly (by United Nations technique – ratio of the number of persons at the age of 15-65 years to one elderly), characterising load elderly on the population of working age during last years was on low level: did not exceed 6 and tended to decrease up to 1998. The coefficient of demographic load is calculated as the ratio of the general number of dependants (the person at age more youngly 15 and persons at age 65 and over) to the population at able-bodied age (15-64 years). Demographic load can have various value: positive – when loading children exceeds loading elderly and negative – in case of prevalence of elderly load.

At the beginning of 2015 year the indicator of the demographic load was equal 470 on 1000 persons at working age, including 332 for children , 137 for elderly persons. It means that two working contain one non-working pensioner.

Such relation between the population of working and elderly age has adverse consequences for pension system. Now the most of state pension systems existing in the world are in inconvenient position. This position forces the governments of many countries to increase the pension age. But if not to increase a pensionable age the further process of ageing of the population will lead to growth of demographic load and decrease of economic growth.

Since 1991 in Azerbaijan as well as in many post-soviet republics the new pension age has been established: 57 years for women and 62 years for men. According the new law about labor pensions in 2017 pension age is increased for men and women – till 65 years.

For the research of the structure of the population by age often is used the index of ageing – the relation of number or a share of older persons to number or shares of children. In 2015 ageing index of ageing was equal 33, that twice larger than in the middle of the last century. It is necessary to notice, that the index of ageing for urban population which equal 33, that is exceed index for the rural population equal 28.

Recent statistic of the State Fund of Social Protection indicate that the number of pensioners in Azerbaijan accounts about 1,3 mln. persons, of them 536 659 are men and other are women. 64% of pensioners receive the old-age pension, 25% receive disability pension, 11% – in connection with loss of the head of the family. In 1999 year the proportion of pensioners in the overall population was 14.8%, in 2006 their part has reached 16.5%, and in 2009 has again decreased to 14%.

The exit on pension for those who has high labor potential and could continue productive professional work, is the powerful stress factor. Because majority of firms employ employees, is not older 40 years, access to

the employment for older persons is limited. Difficulties at labor market are especially sharp for elderly women who have in comparison with men the worst financial position. The elderly persons are less competitive at labor market, because of lack of health and loss of their professional skills , low adaptability to current situation and e. t. c. Elderly persons are needed only at not prestigious workplaces - with low salary or bad working conditions. As a result is reduction of the employment among the elderly population during the last 30 years.

The analysis of structure of employment among elderly persons shows, that employment of people is older 60 years sharply decreases, more, than on 20%. If among age group of 60-64 men almost half is employed, among men is older 65 years only 25% have job. Analyzing employment in different economic sectors, the greatest percent of employment of the elderly is observed in sphere of trade and in agriculture. Among 60-64 years women age group 43% are employed and is older this age group only 29.7%. women had a job.

It is necessary to note that mainly high employment level is kept by pensioners with higher education and with low qualification. The marital status of older persons and educational level also influence quality of their life. Elderly with high education have higher level of a financial position. In accordance with our mentality, the most of older persons live together with the working relatives, that considerably facilitates their life. Placing of older persons in geriatric home also is alien to our mentality, that explains existence only one in all over the country similar house for elderly.

Though health services for pensioners is free, but quality of such service is very low. Single elderly with low incomes cannot get the qualified medical aid and buy expensive medicines. Research of statistical data shows, that health of older persons with low incomes is worse, than pensioners with high incomes. And accordingly among them above a death rate.

Investigation about expenses of the elderly shows, that in process of ageing the consumption structure varies. Expenses at a food, the goods of hygienic and medical appointment, payment of certain types of service especially medical is increased, but expenses at tobacco products, alcoholic drinks, transport are considerably cut down.

The most of older persons in Azerbaijan consider, that the level of their life in 90th years has considerably decreased, they estimate their financial position as unsatisfactory, unstable and unreliable. The standard of living of the elderly is defined by their possibility to satisfy the necessities of life at the expense of goods and services purchase.

In the conditions of the market the purchase of goods and services depends on an economic position of the older person which is defined by level of his income and the prices.

The main parameter of the standard of living of the older persons is the size of pension correlated with a prices of consumer goods and services.

For the estimation of a standard of living of older persons and comparison with other groups of population it is possible to use the indicator which characterizes purchasing capacity of incomes and shows the quantity of sets of a living wage (lw) that the person could buy by the income per capita.

This indicator reflects changes of incomes of the population along with change of the prices for the basic goods and services, is the characteristic of a standard of living. As the this indicator we offer to take the rate (RLW) of the monthly average salary (AW – average

wage) to the living wage (LW – living wage), which is denoted by RLW:

$$RLW = AW / LW.$$

Below in table 1 results of calculations of this indicator are presented.

Table 1 shows, that the indicator of a standard of living of older persons twice less than his average value in the country and only, since 2008 exceeds unit. It means, that incomes of older persons still were below a living wage.

Table 1

Year	Average wage, man.	Average pension, man.	Average living wage, man.	Living wage for older person, man.	Standart of living	Standart of living for elderly
2005	123.6	24.0	55	42	2.25	0.57
2006	141.3	28.0	58	45	2.44	0.62
2007	214.0	41.1	64	50	3.77	0.82
2008	274.4	62.9	70	57	3.92	1.1
2009	298	95.82	84	65	3.55	1.47
2010	331.5	100.4	87	68	3.8	1.48
2011	364.2	112.9	95	72	3.81	1.57
2012	398.4	145.1	108	84	3.69	1.73
2013	425.1	152	116	95	3.66	1.6
2014	444.5	170.5	125	103	3.57	1.66
2015	466.9	173.4	131	108	3.56	1.61

Using calculated values RLW and statistical data of economic growth for the period of 2005-2015, the econometric model characterising dependence between the indicator of a standard of living of older persons and

economic growth in the country is constructed. Data about economic growth are described below in the table 2.

Table 2

The rate of economic growth in Azerbaijan

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Economic growth, %	26,4	34,5	25	10,8	9,4	4,9	0,1	2,2	5,8	2,8	1,1

The economic growth (GGDP) is calculated as ratio of gross domestic product (GDP) of current period and last period. From the table 2 it is shown, that since 2007, sharp decrease in rates of economic growth is observed. It is explained both the world economic crisis, and reduction of prices on oil. Decrease in rates of economic growth should affect a population standard of

living including older persons. For estimating of this influence the regression function is constructed:

$$RLW = f(GGDP),$$

where RLW – standard of living,

$GGDP$ – level of economic growth.

By using Eviews program, we received the following result represented by table 3.

Table 3

Dependent Variable: RLW
Method: Least Squares
Date: 09/08/17 Time: 00:12
Sample: 2005 2015
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GGDP	0.035070	0.003566	9.834749	0.0000
C	1.685778	0.056778	29.69091	0.0000
R-squared	0.914871	Mean dependent var		1.293636
Adjusted R-squared	0.905413	S.D. dependent var		0.435896
S.E. of regression	0.134060	Akaike info criterion		-1.018090
Sum squared resid	0.161749	Schwarz criterion		-0.945746
Log likelihood	7.599497	F-statistic		96.72229
Durbin-Watson stat	2.327541	Prob(F-statistic)		0.000004

$$RLW = 0.03506961954 * GGDP + 1.685778473.$$

Statistical characteristics of the econometric model show, that the model is quite adequate and can be used for the forecast of growth of a standard of living of older part of the population of the country.

And only thanks to reforms in pension system of the Azerbaijan Republic the situation has changed for the better. And still despite all these measures, the average size of pension hardly exceeds living level and is less than 50% from the average salary, that considerably lags behind world indicators. It means that retirement is dangerously for older persons because their incomes are considerably reduced. All of it demands great attention from the government to interests of the elderly and the further perfection of pension system.

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Аббасова Ш. А., Оруджева М. Ш., Оруджева Т. В., Оцінка рівня життя літніх людей в умовах переходу до сталого розвитку в Азербайджанській Республіці

У статті проводиться аналіз рівня життя літніх людей в період переходу до сталого розвитку в Азербайджані. Для оцінки рівня життя літніх і порівняння його з іншими верствами населення використовується показник, що характеризує купівельну спроможність доходів. Використовуючи значення цього показника і дані щодо економічного зростання, побудована економетрична модель. Отримані статистичні характеристики показують, що модель адекватна і може бути використана для прогнозу зростання рівня життя літніх під впливом стійкого економічного зростання.

Ключові слова: літнє населення, сталий розвиток, економічне зростання, економетрична модель.

Аббасова Ш. А., Оруджева М. Ш., Оруджева Т. В. Оценка уровня жизни пожилых в условиях

перехода к устойчивому развитию в Азербайджанской Республике

В данной статье проводится анализ уровня жизни пожилых людей в период перехода к устойчивому развитию в Азербайджане. Для оценки уровня жизни пожилых и сравнения его с другими слоями населения используется показатель, характеризующий покупательную способность доходов. Используя значения этого показателя и данные по экономическому росту, построена эконометрическая модель. Полученные статистические характеристики показывают, что модель адекватна и может быть использована для прогноза роста уровня жизни пожилых под влиянием устойчивого экономического роста.

Ключевые слова: пожилое население, устойчивое развитие, экономический рост, эконометрическая модель.

Abbasova Sh., Orujova M., Orujova T. Estimation of a living standards of elderly population in the conditions of transition to the sustainable development in Azerbaijan Republic

The estimation of standard of living of elderly population and transition to sustainable development in Azerbaijan Republic is considered in this paper. For the estimation of a standard of living of older persons and comparison with other groups of population it is possible to use the indicator which characterizes purchasing capacity of incomes and shows the quantity of sets of a living wage that the person could buy by the income per capita. Using calculated values of this indicators and statistical data of economic growth, the econometric model characterising dependence between the indicator of a standard of living of older persons and economic growth in the country is constructed. Statistical characteristics of the econometric model show, that the model is quite adequate and can be used for the forecast of growth of a standard of living of older part of the population of the country.

Keywords: elderly population, sustainable development, economic growth, econometric model.

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