IMPACT OF DEMOGRAPHIC CHANGES ON THE LABOUR FORCE MARKET AND PENSION PROVISION IN THE REPUBLIC OF MOLDOVA

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Abstract: The purpose of given research is to analyze the impact of demographic changes on the market of labour force and the financial stability of state social insurance in the Republic of Moldova. Population decline, including through labour migration, and ageing population process affect the age and sex structure of labour force, its reproduction and the quality of labour market. Demographic ageing of population is accompanied by an increase in the number of age pensioners, which on the one hand contributes to ageing of labour market and reducing its competitiveness, which requires additional costs for retraining of elder labour force to support the labour market and, on the other, leads to increase in social insurance budget expenditures on age pensions and other social benefits to support and care for the elderly population. As a consequence of the above processes, there is financial instability in the social insurance budget as a result of reduction in contribution income from the employed population. Given article presents the results of calculations of the losses of social insurance revenues from the reduction in the number of employees, which is a challenge to improve the effectiveness of public policies. Based on the results of research, conclusions and proposals to improve the situation on labour market in condition of demographic changes and increase the financial stability of the social insurance system were elaborated.
Keywords: social insurance budget, social insurance contributions, demographic ageing of population, employed population, employees, labour force market, labour migration, pension system, age pensioners.
JEL Classification: H55, J21, J14.

1. Introduction

Population ageing has become one of the significant transformations and global phenomena of the 21st century. Thus, according to the UN data, in 2018 the number of elderly population 65 and over has exceeded the number of children under 5 for the first time in human history, and according to forecasts, every sixth person in the world will be over 65 by 2050, compared to every 11-th in 2019, and natural population growth in the world has decreased by half in the last 50 years or to 10,9 persons per 1000 population in 2015-2020, compared to 20,5 during 1965-1970. In developed economies the share of the population over 65 years old per 100 work age persons (old age dependency ratio) will double by 2050 and will require additional financial resources for the pensions system, health and social protection in conditions of employed population reduction, and, accordingly, a decrease in the amount of insurance contributions. Moreover, according to the OECD, if current budgetary and pension systems are maintained, global GDP per capita will decline from 4% in 2015 to 2% in 2050 (Ostapenko and Snigirev, 2020).

Population ageing is becoming a serious challenge at the contemporary stage of socio-economic development, along with population decline and migration processes in the Republic of Moldova. Changing age structure of population effects on economic development due to the reduction in the share of young population in the traditionally working age population, labour market and, ultimately, population's well-being. Demographic changes put on the agenda problems related to the deficit of labour force, qualified workers, labour productivity and innovations, as well as availability of social protection adequate to the changes taking place in society. The challenges of demographic change, along with crises (economic and pandemic), are putting pressure on both the

financial state and social protection systems of the population. Given these factors, policies must be complex, taking into account the correlation of social and economic development, employment population and social protection for different age groups across the life course as well as solidarity between generations. A healthy and active ageing population has a highly valued in that it prolongs elder people's participation in remunerated economic activity, which contributes to greater diversification of financial revenues to the budget in the form of taxes, wage deductions, state social earmarked contributions, which contributes to improve the financial stability of social and health insurance systems.

2. Research Background

The research of changes in the population's age structure, especially, the increase in the elder people share is called in science "demographic ageing". In the opinion of the French demographer Sauvy A., this phenomenon can be forecasted and calculated, but it is quite difficult to foresee its consequences (Sauvy, 1997). Definitions of demographic ageing in the academic literature include a "quiet revolution"(Denisenko, 2005) or "silver tsunami" (Lebedeva, 2016), given phenomenon is interpreted as "humanity's greatest achievement" or "threat to human existence". At the same time, despite the existing definitions, the ageing process, which has affected almost all countries in the world, has put on the agenda the question of its essence: is this phenomenon natural for all countries or does it have specific features in each country (Dobrokhleb, 2017).

In the Republic of Moldova, the following scientists contributed to the study of ageing and its impact on labour market: Paladi G., Gagauz O., Penina O. (Paladi, Gagauz, Penina, 2009; Gagauz, 2012a; Gagauz, 2012b), Zaharov S. (Zaharov, 2017), in which the specifics of the processes of population decline and ageing in the country, as well as their impact on socio-economic development and the character of labour force reproduction were evaluated. The results of the study of the impact of ageing on labour market, as well as its relationship with the pension system are reflected in the scientific works of Gagauz O., Savelieva G. (Gagauz and Savelieva, 2019), the perfection of the pension system in conditions of the demographic ageing process are presented in the works of Rojko A., Stremenovskaya Z. (Rojco and Stremenovscaya, 2013), Savelieva G., Zaharov S. (Savelieva and Zaharov, 2014; Savelieva and Zaharov, 2013), Sainsus V. (Sainsus, 2010), the reformation of the pension system is proposed by the authors Vaculovchi D., Gîlca V. (Vaculovchi and Gîlca, 2012).

3. Purpose of the research, data and methods applied

The principal purpose is to analyse the impact of demographic changes, such as population decline, demographic ageing and labour migration, on labour force market. As a consequence of above factors, there is a deformation of the age composition the labour force towards the predominance of elder age groups, including the pension age. The field of application of labour force of elder age groups is limited to activities in the agricultural complex with low productivity and low wages, and in the social sectors (public administration, education, health and social protection), where the low earnings from labour activity affects the structure of formation the social insurance budget revenue and replenishment of financial resources and its financial stability. Based on the results of the analysis, proposals for improving the situation on labour market under conditions of demographic change and increasing the financial stability of the social insurance budget were elaborated. The effective purpose is realised by performing the following objectives:

Analysis of tendencies in major demographic changes (population decline, ageing, labour migration) and their impact on labour market, including on the structure and employment of the labour force in elder age groups.

Evaluation of tendencies in the number of population at pension age, including in the regional aspect, by gender, employment opportunities by sphere of economic activity, as well as characteristic of the amount of retirement pensions in relation to wages, by gender, by sector of the economy.

Analysis of the sources of formation the social insurance budget revenues, the system of insurance contribution tariffs, the calculation of financial losses to the budget for changes in labour market due to the reduction in the number of insurance contribution payers (reduction in the number of employees and informal employment).

Elaboration of proposals to improve the situation on labour market under conditions of demographic changes and to increase the financial stability of the social insurance system in the Republic of Moldova.

In order to achieve the study's objectives, a complex and systemic approach was used, as well as scientific methods, including quantitative and qualitative analysis, graphical analysis, authors' calculations, etc. Official statistical data from the National Bureau of Statistics of the Republic of Moldova, Ministry of Labour and Social Protection, National Social Insurance Fund were used in the analysis, as well as some indicators necessary for the study were calculated by the authors. When calculating the indicators, the number of the population with usual residence was used, defined as the place where a person lived predominantly during the last 12 months indifferent of temporary absences (for the purpose of recreation, vacation, visits to relatives and friends, business, medical treatment, religious pilgrimages, etc.).

4. Result and Discussions

In the Republic of Moldova, the population ageing process is different from European countries. Thus, if population ageing in European countries was a gradual process during a long period of time, given process in Republic of Moldova was sharply and at a rapid rate beginning in early 1990s (12,8% in 1990, 13,6% in 2000, 14,4% in 2010, 18,4% in 2018) [1], practically for 30 years more than 20% of the population is above 60. Moreover, the process of population ageing is taking place along with population decline, both as a result of natural reproduction processes (especially can be noted the phenomenon of mortality as a negative component of the vital statistic) and due to the migration outflow of working age population, which affects the population's number and its structure by age and sex (table no. 1).

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[1] Ageing rate calculated by the NBS on the basis of resident population. https://statbank.statistica.md/PxWeb/pxweb/ro/20%20Populatia%20si%20procesele%20demografice/20%20 Populatia%20si%20procesele%20demografice__POP__POP010/POP011600.px/table/tableViewLayout1/?rx id=b2ff27d7-0b96-43c9-934b-42e1a2a9a774.

Table no. 1. **Principal indicators characterizing the population, RM***

	2014	2015	2016	2017	2018	2019	2020	2021
Population (as of January 1), total, persons Including:	2869 226	2844 673	2824 387	2779 952	2730 364	2686 064	2643 883	2597 107
-under working age, 0-15 years old	547 164	542 524	542 543	541 556	539 050	529 955	518 561	504 981
% of total population	19,1	19,1	19,2	19,5	19,7	19,7	19,6	19,4
- working age, 16-56/61 years old	1786 252	1755 800	1725 310	1669 921	1611 684	1603 386	1561 503	1542 013
% of total population	62,3	61,7	61,1	60,1	59,1	59,7	59,1	59,4
- over working age, 57/62+ years old	535 810	546 349	556 534	568 475	579 630	552 723	563 819	550 113
% of total population	18,6	19,2	19,7	20,4	21,2	20,6	21,3	21,2
Population aged 15 and over working or looking for work abroad**	341,9	325,4	319,0	318,4	352,7	140,6	151,1	-
Including as % of the economically inactive population	11,2	10,6	10,1	11,1	12,3	8,4	7,0	-
Indices of demographic dependency, per 100 working age population, as of January 1								
Working age population, total	60,6	62,0	63,7	66,5	69,4	67,5	69,6	68,4
Population under working age	30,6	31	31,4	32,5	33,4	33,0	33,3	32,7
Population over working age	30,0	31	32	34,0	36,0	34,5	36,3	35,7
Life expectancy at birth, years	69,3	69,4	69,9	70,8	70,6	70,9	69,8	-
Males	65,2	65,2	65,7	66,7	66,3	66,8	65,9	-
Females	73,6	73,7	74,2	74,9	75,0	75,1	73,9	-
Ageing coefficient, as of January 1, %	17,5	18,1	18,5	19,2	20,0	20,8	21,7	22,5
Males	14,5	15,0	15,4	16,0	16,7	17,5	18,3	18,9
Females	20,3	21,0	21,5	22,2	23,0	23,9	24,9	25,8

* Since 2014, data on the population with usual residence has been used.
   Since 01.01.2019, the retirement age has increased and constituted 63 years for males and 58 years for females.
   Since 01.01.2021 the retirement age for females has increased to 59 years.
   Data as at 01.01.2021 on the number of resident population is preliminary.
** 2014-2018 NBS calculations on the basis of the resident population, 2019-2020 on the basis of the population with usual residence and the labour force survey of household (labour force survey), in accordance with the new research plan and in accordance with the revised definition of employment.
https://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774
Source: NBS data, www.statistica.md

Data analysis shows that the number of population practically tended to decline annualy: as at 01.01.2019, it was 93,6% compared to 01.01.2014 or decreased by 6,4% (180,2 thousand persons), and in one year or 01.01.2021, population decreased by 1,8% (98,2% compared to 01.01.2020 or decreased by 46,8 thousand persons). Through the period under study, the share of population aged 0-15 years varies between 19,1-19,7% (as of 01.01.2018-2019), at the same time the share of working-age population (16-56/61) decreased from 62,3% as of 01.01.2014 to 59,4% as of 01.01.2021, or by 2,9 p.p, as well as annual growth in the share of population over the working age - 57/62 years, or from 18,6% as of 01.01.2014 to 21,2% as of 01.01.2021. As a result of the above-mentioned

tendencies, the demographic dependence increased, including the demographic dependence index of population over working age constituted as of 01.01.2020-2021 respectively to 36,3 – 35,7 persons per 100 persons of working age population, and total demographic dependence index - 69,6 – 63,4 persons per 100 persons of working age population. Ageing coefficient of population for the analysed period has constantly registered from 17,5 % as of 01.01.2014 up to 22,5 % as of 01.01.2021, the ageing coefficient among females is higher than that among males (25,8% and 18,9% or by 3,6 p.p.), that is explained by the higher mortality among males and the shorter life expectancy (69,5 years for males and 73,9 years for females or the difference is 4,4 years) as of 01.01.2021, the analogous situation takes place during the analyzed period. The migration of working-age population had also reflected to structure of population, including labour market. Thus, in the period 2014-2018, an average of more than 330,000 people were looking for work or working abroad annually.

Table no. 2. **Characteristics of labour migrants by age, gender and place of residence***

	2014	2015	2016	2017	2018	2019	2020
Total (RM), thousand persons	341,9	325,4	319,0	318,4	352,7	140,6	151,1
Urban	96,7	101,6	94,1	96,6	108,5	52,7	58,2
Rural	245,2	223,9	224,9	221,8	244,3	87,9	92,9
Males	219,0	210,8	212,3	211,3	238,2	95,8	109,5
Females	122,8	114,6	106,8	107,2	114,5	44,8	41,6
Total (RM), %	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Urban	28,3	31,2	29,5	30,3	30,8	37,5	38,5
Rural	71,7	68,8	70,5	69,7	69,2	62,5	61,5
Males	64,1	64,8	66,6	66,4	67,5	68,1	72,5
Females	35,9	35,2	33,4	33,6	32,5	31,9	27,5
Structure of labour migrants by main age groups, % of total							
15-24 years	27,7	23,9	24,4	18,5	18,9	19,2	19,4
25-54 years	68,3	71,7	71,1	76,0	76,3	75,8	73,4
55 years and over	4,0	4,4	4,5	5,5	4,8	5,0	7,2

* NBS calculations in 2014-2018 - on the basis of the resident population, in 2019-2020 - on the basis of the population with usual residence and the labour force survey of household (labour force survey), in accordance with the new research plan and in accordance with the revised definition of employment.
Source: NBS data and authors' calculations, www.statistica.md

More 60% of labour migrants leave rural areas, however, during the analyzed period, there is an increasing tendency in the share of migrants from urban, including from 28,3% in 2014 to 30,8% in 2018, and the share of labour migrants from urban increased by 1,0 p.p. only for one year (2020). By gender, male population dominated in labour migrants and in 2020, their share reached the highest value of 72,5%, for female migrants there is a clear downward trend from 35,9% in 2014 to 32,5% in 2018 and a sharp decrease by 4,4 p.p. in one year (31,9% in 2019 and 27,5% in 2020) due to the pandemic crisis and their specific employment in the service sector. By age criterion, the main share of labour migrants (more 70% of working age population) is the most productive age, 25-54 years, with professional education (in 2020, the share of professionally trained migrants constituted 31,9%, with higher education 13,8% and 11,3% of secondary special education[1]).

It follows from the above, that migration factor not only contributes to changes in the population structure by age and sex, affects the reproduction of the population, but also worsens the situation on labour market, including the ageing of the labour force, increasing the share of elder age groups (pre- and pension age). A comparative analysis of the

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[1]Authors' calculations on the basis of NBS data, www.statistica.md.

economically active, employed and pensioners gives an opportunity to evaluate not only the competitiveness of national labour market but also the financial sustainability of the pension system.

Table no. 3. **Economically active/inactive and employed population**

	2014	2015	2016	2017	2018	2019	2020
Economically active population, thousand persons	1 019,6	1 038,0	1 035,3	999,7	1 018,1	919,3	867,3
Economic activity coefficient(rate), %	43,3	44,5	44,8	44,1	45,9	42,3	40,3
Employed population, thousand persons	981,5	989,1	993,7	960,8	988,5	872,4	834,2
Employment coefficient(rate), %	41,7	42,4	43,0	42,4	44,5	40,1	38,8
Employees, thousand persons	650,3	629,9	606,2	604,2	589,2	678,4	651,8
% of employed population	66,3	63,7	61,0	62,9	59,6	77,8	78,1
Employees occupied in a formal workplace, thousand persons	639,4	622,9	598,4	597,9	579,7	667,8	644,0
Including in a informal workplace	49,8	49,3	42,2	38,1	35,3	41,8	36,7
Employees occupied in informal sector, thousand persons	8,1	4,3	4,8	3,6	6,6	7,9	6,4
% of total employees	1,7	1,1	1,3	1,0	1,0	1,6	1,2
Employees occupied in formal workplace	589,6	573,6	556,2	559,9	544,4	626,0	607,3
Employees occupied in informal workplace	60,7	56,3	50,0	44,4	44,8	52,4	44,5
Including % of total employees	9,3	8,9	8,2	7,3	7,6	7,7	6,8
Economically inactive population, thousand persons of them:	1 168,5	1 140,0	1 122,6	1 108,4	1 039,7	1 255,9	1 283,6
Share of the economically inactive population, working-age population aged (15 years and over), %	56,7	55,5	55,2	55,9	54,1	57,7	59,7
Pensioners (by age, by disability, etc.), thousand persons	537,8	543,1	534,2	527,7	503,9	566,2	580,2
% of economically inactive population	46,0	47,6	47,6	47,6	48,5	45,1	45,2
Share of pensioners and labour migrants in economically inactive population, %	57,2	58,2	57,7	58,7	60,8	53,5	52,2

Source: NBS data and authors' calculations, www.statistica.md

Analysis of changes in the structure of working age population of 15 and over, ongoing under influence of demographic processes, shows the growth tendencies in the *coefficients of economic activity and employment* during 2014-2018. Taking into account these processes and transition from 2019 to a new methodology of household surveys and the concept of "employed population" according to European standards, as well as the consequences of pandemic crisis in 2020, all this in general led to decline both in the number of economically active and employed population, and the corresponding coefficients. In 2020, the activity rate was registered at 40,3% and the employment rate at 38,8%, the lowest for the whole analyzed period. At the same time, against the background of a decrease in these indicators, the share of economically inactive population is growing, which in 2020 reached 59,7%, i.e. practically 60% of working-age population does not participate in national labour market, GDP growth and budget revenues (national, social and health insurance) and the share of pensioners and labour migrants in economically

inactive population exceeds 50%. The tendency to reduce employees is observed in 2014-2018 (by 9,4%), including by 3,9% in 2020 compared to 2019, but their share in employed population increased in 2019-2020 to 78% (in 2014-2019, it decreased from 66,3% to 59,6%, or by 6,7 p.p.). Which is a challenge for economic and social policymakers in addition to the above-mentioned reasons. Moreover, despite a decrease in the number of employed population in the informal sector, the employment of employees in informal working places was maintained (7,7% in 2019 and 6,8% in 2020 of total employees- hiring workers).

In condition of the existence an unstable labour market and a threat to the financial stability of the state social insurance system, there is the factor of demographic ageing and the maintained share of population of pension age (45,2%, table no. 3), of which about 24% are involved in the labour market (table no. 4).

Table no. 4. **Dynamics of changes in the number of pensioners, as of January 1**

	2014	2015	2016	2017	2018	2019	2020	2021
Pensioners, total, as of January 1, thousand persons*	**679,9**	**690,2**	**700,2**	**711,7**	**716,0[1]**	**703,9**	**696,0**	**686,3**
of which: pensioners by age(retirement), as of January 1, thousand persons *including pensioners:*	495,9	507,5	518,8	531,8	533,0	526,7	524,5	522,8
- agricultural sector, thousand persons	201,8	199,0	195,9	193,9	189,9	182,9	175,9	170,0
% of total pensioners by age	40,7	39,2	37,8	36,5	35,6	34,7	33,5	32,5
-non-agricultural sector, thousand persons	294,1	308,4	322,9	337,9	343,0	343,8	348, 5	352,8
Pensioners by age: Males, thousand persons	145,9	149,9	153,3	157,3	156,9	154,9	154,5	157,7
% of total by age	29,4	21,7	29,5	29,6	29,4	29,4	29,5	30,2
Female, thousand persons	350,0	357,6	365,6	374,5	376,1	371,7	370,0	365,1
Pensioners by age in the territorial context, thousand persons								
mun. Chisinau	102,3	106,8	111,7	116,8	119,2	118,97	120,7	121,7
North	162,2	162,82	163,4	164,6	162,7	158,95	156,3	153,9
Centre	137,2	140,7	143,9	147,5	147,8	146,5	145,6	145,3
South	73,3	75,5	77,3	79,6	79,8	78,9	78,4	78,2
A.T.U. Gagauzia	20,8	21,4	22,2	22,9	23,1	22,8	22,8	22,9
Pensioners by age in labour market, pers.	147 996	154 654	160 658	164 477	170 028	174 757	175 656	172 516
Share of pensioners by age in labour market - total, %	21,8	22,5	23,0	23,3	23,3	23,0	23,4	23,7

* Since 01.01.1918 the pensioners of the law enforcement agencies registered with the NCSS are included in total number of pensioners.
Source: NBS data, www.statistica.md

The improving of the legislative base in the field of social insurance and especially in the pension system, including the age limit, the insurance period and the conditions of retirement for certain categories of the population conditioned a slight decrease in the inflow of pensioners by age criterion. As a result, the number of age pensioners decreased and stabilised at 527,000-523,000 as of January1, 2019-2921. The population from the non-agricultural sector dominated in total pensioners (in last three years - 65%-67%), and by gender, females predominate in total pensioners by age in the proportion of about 70% and 30% males (due to a higher mortality rate in working age and a lower life expectancy).

In territorial aspect, 30% of pensioners are registered in the North zone, the second place with 28% in the Center zone, the third place - 23% in mun. Chisinau, 15% in the South zone, and only 4% in Gagauzia, the slight increase of the number of pensioners is registered in Chisinau or by 1,5% compared to the previous year on January 1, 2020 and by 0,8% compared to January 1, 2020. The number of age pensioners working on labour market increased, including by 18,1% as of January 1, 2019 compared to January 1, 2014, by 0,5% as of January 1, 2020 compared to January 1, 2019, and decreased by 1,8% as of January 1, 2021 compared to January 1, 2020 with a slight increase of 0,3% in the share of working pensioners. In the regional aspect, the highest share of pensioners by age on labour market as of January 1, 2021 is in mun. Chisinau – 35,6%, followed by ATU Gagauzia – 23,9%, Central zone 20,6%, Northern zone 19,6% and Southern zone 19,4%[1]. The participation of pensioners in labour market, on the one hand, is a means of increase their incomes, and on the other hand, as payers of social and health insurance contributions, they replenish the revenues of the corresponding budgets, partially reducing the burden of employed population in given field. The characteristics of employed population in the pre- and pension age group of 55 years and over, by economic activity and by main zones are presented in table no. 5.

Table no. 5. **Distribution of employed population (55 and over) by main types of economic activity and zones, RM**

	2014	2015	2016	2017	2018	2019	2020
Employed population by economy - total, **RM**, thousand persons	981,5	989,1	993,7	960,8	988,5	872,4	834,2
Including: **Age group 55 years and over**, thousand persons	193,5	204,3	220,0	226,6	253,5	186,5	181,1
%	19,8	20,7	22,1	23,5	25,6	21,4	21,7
Share of employed population (55 years and over) by type of economic activity							
Total (55 years and over), %	100,0	100,0	100,0	100,0		100,0	100,0
Agriculture, forestry and fisheries	44,9	47,5	50,5	50,1	58,8	29,8	28,4
Industry	9,4	0,7	9,0	9,0	7,6	12,8	11,8
Construction	3,5	2,6	2,8	3,3	2,7	4,0	4,6
Wholesale and retail trade; Accommodation and public catering activities	8,8	7,5	8,3	8,2	7,1	12,3	11,2
Transport, storage; Information and communication	5,0	5,4	4,8	4,1	3,6	5,5	7,1
Public administration, Education, Health and Social protection	21,1	20,1	18,4	18,9	15,5	27,0	29,8
Other activities	7,3	16,2	6,2	6,4	4,7	8,6	7,1
Share of age group of 55 years and over in employed population of a concrete type of economic activity, % from employed population by type of activity							
Agriculture, forestry and fisheries	27,3	28,7	30,6	33,3	38,4	30,4	29,2
Industry	15,5	17,0	17,4	18,9	17,8	18,6	17,5
Construction	12,6	10,1	12,8	17,3	14,9	12,2	13,9
Wholesale and retail trade; Accommodation and public catering activities	10,7	10,5	12,1	12,0	12,6	14,0	13,7
Transport, storage; Information and communication	15,6	18,2	17,8	16,8	16,5	17,2	20,8
Public administration, Education, Health and Social protection	21,7	21,5	22,7	23,5	22,4	25,5	27,9

[1] Regional statistics, social protection. www. https://statistica.gov.md/pageview.php?l=ro&idc=349&.

Other activities	16,8	17,3	16,9	19,1	16,6	20,2	18,0
Share of age group of 55 years and over in employed population by main zones, % from employed population of region							
mun. Chisinau	15,6	17,1	17,4	17,6	16,2	14,9	16,0
Northern zone	22,5	24,9	24,1	25,6	28,4	26,2	25,9
Central zone	19,1	19,7	23,3	25,1	28,2	23,1	23,0
Southern zone	23,3	20,9	24,3	27,1	30,9	22,2	22,5
Share of employed population (55 years and over) by working hours per week, % employed population in this age group							
Employed population - total, 55 and over, % *	100,0	100,0	100,0	100,0		100,0	100,0
0-20 hours	8,4	9,0	8,1	8,2		10,2	14,0
21-30 hours	22,4	24,0	27,0	25,4		12,2	11,3
31-39 hours	17,5	18,0	16,5	16,7		15,4	16,2
40 hours	31,0	28,2	29,9	28,2		39,9	37,8
41 hours and more	20,7	20,8	18,5	21,5		22,3	20,7

* NBS data for 2018 not available.

Source: NBS data and authors' calculations, www.statistica.md

The analysis of labour market situation shows that the number of employed population in 2014-2018 was unstable, with a sinusoidal tendency of growth - decline. Starting in 2019, a new methodology of household survey (labour force survey) and a new standard of labour force concept have been introduced, so the number of employed population is not comparable to the previous period. In 2020 compared to 2019 its number decreased by 4,4% in one year, including both demographic changes and the impact of the pandemic crisis. Moreover, the share of employed population (55 years and over) decreased to 21-22% of total. The main fields of economic activity of this age group are agriculture, forestry and fisheries (28-30% of employed in this age group both in economy and in economic activity), with low wages and productivity, as well as the low share of hired workers (10-12%), i.e. labour market participation does not provide a significant financial contribution to the social insurance budget through social insurance contributions and in this case it can be mentioned only improving the material well-being of this age group due to 2 sources of income (pensions and wages). The second field of employment (the category of aged 55 and over) is public administration, education, health and social protection, where the share of this category ranges from 27 to 30% of total number of employed in economy (26-28% for given type of activity). In industry and wholesale and retail trade, accommodation and public catering activities, the share of this category is approximately the equal (respectively, 11,8% and 11,2% of employed in given category in economy) and slightly higher in given activities (respectively, 17,5% and 13,7%), and in transport, storage, information and communication even achieves 20,8%.

At the same time, the employment discussed above can be considered as the involvement of labour force in labour market to cover its deficit, balance the market and increase the employment rate. But for the Republic of Moldova, in conditions of an ageing labour market and reducing number of employees, an important issue is *retirement*, which is based on the principle of the solidarity of generations (the demographic dependence index of population in nonworking age constituted 68,4 per 100 persons of working age population, Table no. 1). In this context, elderly workers should not only be considered as the labour force, but also as real taxpayers of the social security and social protection system. When considering given problem, it should be noted that the share of workers (55 and over) with regime of working week of up to 40 hours constituted 37,8% in 2019 and in 2020 – 41,5% or an increase of 3,7 p.p., i.e. according to the current legislation (Labour Code) remuneration in the country are paid according to the amount of real time worked.

From this a conclusion follows that with some improvement in their financial situation, the amount of transferred state insurance contributions decreases accordingly to the wage received.

As mentioned above, one of the reasons the pensioners' employment is the possibility to improve their material well-being. In the Republic of Moldova the amount of pensions of some population' categories is small and barely covers the subsistence level of the pensioner. The basis for calculating the amount of pension is insurance income, wages, which are replaced by the pension when reaching the retirement age. However, the replacement amount of 40% and more established by the European Convention is not implemented in the Republic of Moldova, and the replacement coefficient is barely up to 30%. The average monthly wages and pensions are presented in table no 6.

Table no. 6. **Comparative characteristics of average monthly wages and retirement pensions**

	2014	2015	2016	2017	2018	2019	2020	2021
Average monthly wage of an employee in the economy (*gross*), lei*	**4089,7**	**4610,9**	**5084,0**	**5897,1**	**6446,4**	**7356,1**	**8107,5**	**9115,9**
% compared to the previous year	111,3	110,5	110,3	112,1	113,2	114,1	110,2	112,4
Male average monthly wage, lei	4374,9	4881,3	5414,4	6017,0	6779,4	7808,0	8558,5	-
Female average monthly wage, lei	3831,8	4235,2	4631,4	5204,0	5800,7	6709,8	7387,2	-
Wage difference between males and females (Gender Pay Gap, GPG in monthly wage), %	12,4	13,2	14,5	13,5	14,4	14,1	13,7	-
Average monthly wage in *industry*, lei	4388,1	4855,2	5267,9	5815,8	6485,7	7151,0	7673,6	8333,6
Average monthly wage in *construction*, lei	4165,7	4378,1	4843,2	5544,2	6198,2	7155,3	7728,1	8601,2
Average monthly wage of an employee in *agriculture, forestry and fisheries*, lei including:	2708,9	2994,0	3300,4	3688,4	4188,7	4768,7	5167,3	5790,9
- % of the average monthly wage in the country	66,2	66,0	66,0	66,0	66,8	65,9	63,7	63,5
- % of the average monthly wage in the real sector	63,9	63,8	63,0	63,4	64,8	64,3	61,7	60,4
Average monthly wage of an employee in the *public sector*, lei	3699,2	4125,3	4359,7	4950,1	5675,1	6636,2	7313,8	7786,6
Average monthly wage of an employee in the *real sector* of the economy, lei	4238,8	4814,6	5390,1	6000,1	6748,2	7627,1	8402,7	9595,0
Ratio of wages in the budgetary and real sectors of the economy, %	87,3	85,7	80,9	82,5	84,1	87,0	87,0	81,2
Subsistence level of a retirement pensioner (by age), lei	1343,7	1437,4	1494,8	1547,5	1574,2	1707,4	1759,8	1811,7
Consumer price index (average annual), %	105,1	109,7	106,4	106,57	103,05	104,84	103,77	105,11
Consumer price index for food products, %	106,5	109,8	107,4	107,93	105,39	107,61	107,35	106,96
Consumer price index for non-food products, %	105,5	111,8	106,3	104,53	102,67	104,19	100,89	105,95
Consumer price index for services, %	102,5	106,2	104,9	107,06	99,78	101,47	102,38	101,28
Indexation of State social insurance pensions, %	6,45	7,95	10,1	6,8	6,6	5,3	4,83 on 04.01.2020 1,07 on 01.10.2020	13,94% up amount 9900.0 lei plus fixed sum 171.71 lei

Replacement rate (pension/wage), %**	26,7	25,8	25,6	25,6	25,5	25,1	25,5	-
Average retirement pension (by age), as of January 1, lei	1049,92	1114,73	1191,83	1301,14	1456,86	1643,72	1842,99	2067,55
% compared to the previous year	106,4	**106,2**	106,9	109,2	112,0	112,8	112,1	112,2
Average retirement pension (by age) in the agricultural sector as of January 1, lei	899,18	949,28	1007,27	1093,70	1208,78	1289,06	1447,39	1522,18
Average retirement pension (by age) in the non-agricultural sector, as of January 1, lei	1153,34	1221,51	1303,82	1420,15	1594,23	1832,36	2042,73	2330,39
Average retirement pension (by age), males, as of January 1, lei	1190,4	1268,1	1362,5	1491,1	1682,4	1940,1	2157,8	2409,2
Average retirement pension (by age), females, as of January 1, lei	991,4	1050,4	1120,3	1221,4	1362,8	1520,2	1711,6	1919,9
Ratio of male to female retirement pensions (by age), %	83,3	82,8	82,2	81,9	81,0	78,4	79,3	79,7

* Since 2019 the methodology for assessing wages has been changed, for 2021 no wage data.
** Data from the Ministry of Labour and Social Protection for 2014-2018, for 2019-2020 authors' calculations.
Source: NBS data, www.statistica.md

Through the analyzed period, annual growth in the average monthly wage per employee overall in the country was 10% and more, which took place for certain types of economic activity, although in some cases at a lower rate. However, the comparison of the average monthly wages of workers by type of activity and its average amount in economy overall in the country allowed, that only the wage of real sector the economy exceed the average amount in economy (including in 2020 by 3,6% and in 2021 by 5,3%) and male wages (including in 2020 by 5,6%.) The wages of a worker in the sectors, which mostly persons aged 55 and over, are lower. Thus, amount of wage in the public sector is lower than the average in the country, including by 9,8% in 2020 and by 14,6% in 2021. The average monthly wage of a worker in the agriculture, forestry and fisheries sector constitutes 63,5% of the average in economy as a whole and 60,4% of the average monthly wage in the real sector of economy. In addition to sectoral differentiation in the amount of average monthly wages, there is a differentiation in the gender aspect (males - females), which has remained at the level of 14% for the last five years. As a result of employment in working places with low wages and as a consequence of given factor, there is a low level of pensions' amount, which, despite the indexation, in 2014-2017 was lower than the social standard accepted in the country or the subsistence level for a pensioner (respectively, 83,0%, 82,9%, 87,0%, 94,1%). Only due to indexation and social support for people of pensionable age during the pandemic crisis the average monthly pension increased within one year, including by 12,1% in 2019 and by 12,2% in 2020. The differences in wages between male and female, interruptions in work due to childbirth and care of a child or other family members, have let to the difference from 18% to 20% in the average retirement pension (by age) by gender during the period analyzed, which is maintained for January 1, 2021 (20,3%).

The synergistic effect of analyzed problem shows a low replacement coefficient (replacement rate) of wage for the established pension, which causes population' distrust towards the existing state pension system, and even is a reason for evasion from paying social insurance contributions. The replacement coefficient shows the income from labour activity of a worker, who loses it from the moment of work termination and retirement. The average replacement coefficient at the national level shows the ratio between the amount of the average monthly retirement pension (by age) and the average monthly wage in economy of country as a whole. In the Strategy for reforming the pension system of the Republic of Moldova (Hotărîrea Parlamentului Republicii Moldova,

1998) *the value of the replacement rate was provided at the level of 42%* (ILO, C102 - Social Security (Minimum Standards) Convention, 1952 (No. 102), which was not ratified by the Republic of Moldova, but has the replacement rate of 40%. According to Recommendation 167 (ILO, R167 - The Maintenance of Social Security Rights Recommendation, 1983 (No. 167), the amount of coefficient for developed countries is established at 45% and currently reaches the level of 50%). The experience of other countries shows, for example, in Ukraine the replacement rate constitutes 50%, including for science sphere - up to 80%, for public administration - up to 75%, in Russia the rate constitutes 40%, in France - 70-80%, in Croatia - 80-90%. In the Republic of Moldova, the replacement rate tends to decrease, if in 2014 it was 26,7%, then in 2018 – 25,5% or 1,2 p.p. less and in 2019-2020, respectively, 25,1% and 25,5%, that is, the gap between previously received labour income and the amount of the assigned pension remains sufficiently substantial, which is one of the main reasons for the continuation of economic activity of pensionable age persons independently from the physiological capabilities of their organism.

The decline and ageing population, migration processes, the ageing of labour force market and as a consequence growth of burden on employed population, low pensions amount and replacement rate of wage cause numerous problems to the social insurance system and the formation of the State Social Insurance Budget, including ensuring its financial stability.

The revenues of State Social Insurance Budget is formed at the expense of obligatory state insurance contributions, transfers from the state budget and other receipts, with the principal share (60-70%) is the contributions by the taxpayers of the given system. Transfers from the state budget are an important part the budget deficit coverage in conditions of the low level the coverage the requirement the pension system and other social benefits at the expense of the above-mentioned source.

Table no. 7. **Structure of State Social Insurance Budget revenues, Expenditure on pensions**

	2014	2015	2016	2017	2018	2019	2020
Revenues, mln lei	12028,9	13433	15 060,6	17 818,7	19 790,3	21 748,3	24 285,6
Compulsory social insurance contributions, mln lei Including:	8 362,9	9 273,1	10 036,6	11 864,0	13 037,9	13 635,7	14 295,4
Compulsory social insurance contributions calculated by employers from the Remuneration Fund, mln lei	6664,5	7273,7	7871,1	9373,4	10094,1	10517,8	11028,5
Individual contributions calculated from the wage of hiring worker, mln lei	1715,8	1867,8	2024,9	2488,4	2787,5	3270,2	3394,2
Contributions calculated by self-employed workers (individual enterprises, advocates, lawyers, notaries, owners of entrepreneurial patents), mln lei	93,1	92,2	95,0	103,5	92,7	115,9	117,0
Other revenues, mln lei	5,9	6,9	8,1	13,7	82,2	155,6	220,8
Transfers from the budget, mln lei	3 660,1	4 153	5 016,0	5 941,0	6 670,2	7 957,0	9 769,4
including to cover the Social Insurance Budget, mln lei	1 121,5	862,8	1 340,6	898,6	1 113,9	1 987,7	2 554,6
Revenues structure, %	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Contributions for compulsory social insurance, %	69,5	69,0	66,6	66,6	65,9	62,7	58,9
Transfers from the budget, %	30,4	30,9	33,3	33,3	33,7	36,6	40,2
Other revenues, %	0,1	0,1	0,1	0,1	0,4	0,7	0,9
Expenditures, mln lei	12 019,5	13 490	14 964,7	17 614,5	19 426,5	21 602,3	24 244,4
Social insurance, mln lei			11 059,7	12 242,0	13 684,7	15 344,3	16 787,4
Pensions, mln lei	9 685,5	9 782	9 583,8	10 611,3	11 859,6	13 342,9	14 125,9
% in social security expenditures			86,7	86,7	86,7	87,0	84,1
% of total expenditures	80,6	72,5	64,0	60,2	61,0	61,8	58,3

Source: NBS data and NSIH, www.statistica.md, www.cnas.md

Informal employment, both in informal sector enterprises and informal working places, is one of the factors the decline in the number of taxpayers. Despite the 7,5% decline in number of employed population in informal sector of economy in 2020 compared to 2019, 23,1% of employed population in 2019 were concentrated in informal working places and in 2020 – 22,4% (down by 0,7 p.p.). The major share of given category of employed was occupied at enterprises in informal sector – 72,7% in 2019 and 74,7% in 2020, the share of employed in informal working places at enterprises in formal sector constituted 7,2% in 2019 and 6,6% in 2020, a insignificant number of informally employed persons (1,4% in 2019 and 0,7% in 2020) are occupied in households as hiring workers (employees). In total number of hiring workers, the share of informally employed persons is decreasing: while in 2019 it constituted 7,7%, in 2020 - 6,8%, or 0,9 p.p. less. Informal activities prevail in agriculture, forestry and fisheries (58,3% of informally employed), construction (19,5%), wholesale and retail trade, accommodation and public catering activities (9,5%) and other activities (6,3%)[1]. Due to the fact that characteristic feature for informal employment is work under an oral agreement (without an official signing of an employment contract worker-employer), wages "in envelopes", lack of social guarantees, the employer's refusal to transfer insurance contributions of given category of employees, in these conditions it is difficult to predict the amount of future pension and whether it will be assigned in accordance with the current legislation, as the income of workers is not registered and is not reflected as income by the employer in official documents presented to the relevant financial and insurance authorities and as insurance revenues in the system of state compulsory social insurance (Legea RM, 2000).

The Strategy for the Reform of the Pension Insurance System in the Republic of Moldova provides a gradual decrease for amount of compulsory contributions of state social insurance paid by employers while increasing individual compulsory state social insurance contributions for workers. Before 2002 employers transferred to the Social Insurance Budget 31% of the Labour Remuneration Fund and 1% of workers' individual contributions, in 2002-2003 these rates were 29% and 1%, and since 2004 the employer' contributions were decreased by 1% and the workers' contributions increased by 1% (2004 - 28% and 2%; 2005 - 27% and 2%; 2006 - 26% and 3%; 2007 - 25% and 4%; 2008 - 24% and 5%, and so on, i.e., the tendency to reduce the employer tariff from the Labour Remuneration Fund (from 29% to 23%) and the increase in amount of worker' personal contribution (up to 6%). At the same time, the changes affected both the amount of tariffs and the procedure for establishing individual compulsory state social insurance contributions transferred by different categories of physical and juridical persons, including land owners, patent holders and other categories of taxpayers. All this is

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[1] Calculated by the authors on the basis of NBS data, www.statistica.md.

connected with the process of implementing structural reforms in the economy and social sphere, the development of private property and, consequently, new forms of organization of economy activities, the improvement of the legislative normative framework and other factors. The several categories of principal taxpayers and contribution rates for 2020 are presented below. It are established in accordance with the Law on State Social Insurance System No. 489 of 08.07.1999. Percentage rates of social security contributions paid by employers in 2020 were the following[1]:

-employer's contributions to Labour Remuneration Fund and other benefits for workers who concluded an individual labour contract and work in the budget sector and also self-financing institutions - 23%, in the private sector and in higher education and medico-sanitary institutions - 18%;

-employer's contribution for civil aviation workers whose working conditions are classified as special - 26%, for Labour Remuneration Fund and other benefits, for those employed in the private sector;

-employer's contribution to Remuneration Fund and other benefits for workers hiring and working according to an individual labour contract in the agricultural sector - 18%, of which 6% is subsidized from the state budget;

-contributions paid by physical persons carrying out professional medical activity independently in one of the forms of organization of given activity provided by Law of the Republic of Moldova No. 411/1995 constituted 18% on the family doctor's revenue;

-the employee's individual contribution tariff of worker is set in the amount of 6% of the wage and other benefits;

-the fixed compulsory annual sum of social insurance contribution tariff constituted amounted 10740 lei (in 2019 - 9456 lei), including for:

- employers in the field of taxi motor transportation of passengers - for each worker-driver;
- non-working persons, including founders of individual enterprises, notaries, advocates, executors, holders of individual patents, authorized managers and other categories according to the current legislation.

For physical persons, who concluded an individual social insurance contract with the National Social Insurance Fund, the annual fixed tariff constituted 10740 lei (in 2019 - 9456 lei).

For physical persons, carrying out activities as day laborers, according to the Law of the Republic of Moldova on the procedure for making of casual unqualified work by day laborers No. 22/2018, as well as for owners or tenants of agricultural land, who individually work the land, the fixed tariff was set at MDL 2736 (in 2019 - MDL 2412).

So, according to the data carrying out of the Social Insurance Budget, the revenue from social insurance contributions increased by 4,6% in 2020 compared to 2019 (table no. 7). The calculated base of contributions from remuneration fund and other benefits was declared in the amount of 55977104,0 thousand lei, of which 1104341,6 thousand lei is the wage fund exclusively for workers carrying out agricultural activity, who have the right to preferential tariff, and 120815,2 thousand lei (0,2%) is the remuneration fund for workers who work in special conditions (flying personnel and flight control personnel in aviation). Employers' contributions assessed on wage fund and other benefits, as well as individual contributions transferred by workers from their wage constitute the basis in the structure of state social insurance contributions. In given context, the decline in the number of employed population, including the reduction in share of hired workers (table no. 5), as

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[1] National Social Insurance Fund. Report on the execution of the State Social Insurance Budget in 2020, 2021, www.cnas.md.

well as the existence of informal employment, for which the absence of labour contracts with workers is a specific factor, the non-payment of social insurance contributions are specific factors, all this negatively impacts on the formation of the Social Insurance Budget and its financial stability.

In 2020, 16,7% (in 2019 – 16,8%) of total employed population in national economy were employed in the informal sector and 22,4% (in 2019 – 23,1%) of working places were informal, of which 23,8% of total employed population were hired workers. In the non-agricultural sector of economy, the share of informal employment constituted 10,8% and the largest share of informally employed was registered in construction, where given category of workers accounted for 64,9% of total employment in this sector, while the share of hired workers carrying out activities in informal working places constituted 6,8%. In this context, it should be mentioned the negative fact of receiving a wage "in an envelope", which in 2020 was received by 6,7% of workers, including the largest shares of workers are in agriculture (60,8%), construction (13,4%), trade (9,9%) and industry (6,3%).

Table no. 8. **Main indicators of development the informal employment, RM***

	2014	2015	2016	2017	2018	2019	2020
Employed population, thousand persons	**981,5**	**989,1**	**993,7**	**960,8**	**988,5**	**872,4**	**834,2**
Share of formal working places, % of total	66,5	63,4	61,7	63,0	60,3	76,9	77,6
Share of informal working places, % of total	33,5	36,6	38,3	37,0	39,7	23,1	22,4
Share of hired workers in total employed population, %	66,3	63,7	61,0	62,9	59,6	77,8	78,1
Share of hired workers in a formal workplaces, % of total	90,7	91,1	91,8	92,7	92,4	92,3	93,2
Share of hired workers in a informal workplaces, % of total	9,3	8,9	8,2	7,3	7,6	7,7	6,8
Number of workers for whom the employer has not paid compulsory) social insurance contributions, thous. persons*	66,1	59,1	54,3	49,0	51,2	49,2	42,6
% from total hired workers in informal sector**	91,7	86,9	87,3	87,2	90,0	93,9	95,7
Share of informal working places, % from total for this type of economic activity							
Agriculture, forestry and fisheries	77,4	82,5	82,3	82,5	82,9	64,3	65,7
Industry	6,3	6,0	6,4	5,0	4,8	5,6	4,3
Construction	59,3	62,6	58,6	60,0	61,3	64,0	65,4
Wholesale and retail trade, accommodation and public catering	15,8	15,6	16,0	15,3	12,8	11,7	8,2
Transport, storage, information and communication	10,4	11,7	14,6	9,4	9,0	9,0	7,5
Public administration, education, health and social protection	0,3	0,5	0,6	0,3	0,6	0,2	-
Other activities	14,3	14,3	15,7	17,3	18,4	16,1	13,1

* NBS data for 2014-2020 is calculated on the basis of the population with usual residence, 2019-2020 household labour force survey (Labour Force Survey) was carried out according to the new plan and in accordance with the revised definition of employment.

** Employees data for 2014-2018 were calculated based on the resident population, 2019-2020 - based on the population with usual residence.

Source: NBS data and Proceedings "Workforce. Employment and unemployment" for 2015-2021, www.statistica.md, https://statistica.gov.md/category.php?l=ro&idc=107&, https://statistica.gov.md/pageview.php?l=ro&idc=263&id=2204

Practically 96% of hired workers (66% of which are males) with the status of informal employment do not have labour agreements, working by a "*oral arrangement*", and for given category of workers the employer does not pay social insurance contributions, leaving them without the right to a retirement (age) pension and other social benefits. Informal employment has a negative impact not only on the absence of social protection for workers, but also on the reliability and stability of the Social Security System through the reduction of unpaid social insurance contributions according to the tariff as the main source of revenue for the State Social Insurance Budget (due to the decline of possible taxpayers, as employers in the informal sector do not pay contributions, including both physical and juridical persons). Calculations of State Social Insurance Budget (SSIB) losses due to non-payment of social contributions from the remuneration fund of workers "*by arrangement*" showed the growth in losses by 12,1% in 2019 compared to 2018, even with a 7,9% year-on-year reduction in workers and a 3,7% decreased in 2020 compared to 2019.

Table no. 9. **Assessment of the possibility of supplementing**
the State Social Insurance Budget with formal employment of employees
(transition from informal to formal employment)

	2018*	2019**	2020**	2020 in compared to 2019	
				Growth/decrease, %	Difference (+/-) in absolute values
Hired workers, occupied informally, thous. persons	56,9	52,4	44,5	84,9	-7,9
Hired workers, occupied in activities "by arrangement", thous. persons Including by types of economic activity:	51,1	49,2	42,6	86,6	-6,6
Agriculture, forestry and fisheries	24,1	23,8	26,2	110,1	+2,4
Industry	3,5	3,1	1,2	38,7	-1,9
Construction	3,7	7,5	6,1	81,3	-1,4
Wholesale and retail trade, accommodation and public catering	10,9	9,0	5,5	61,1	-3,5
Transport, storage, information and communication	0,0	-	-	-	-
Public administration, education, health and social protection	0,0	0,0	0,0	-	-
Other activities	7,8	5,6	3,6	64,3	-2,0
Hired workers for whom employers have not paid social insurance contributions, thous. persons	51,2	49,2	42,6	86,6	-6,6
Amount of possible losses to SSIB from non-paid of social contributions of hired workers occupied "by arrangement", thousand lei	**1580748,462**	**1772199,312**	**1706338,613**	**96,3**	**-65860,6992**

Source: Authors' calculations on the basis of NBS data, https://statistica.gov.md/pageview.php?l=ro&idc=263&id=2204

5. Conclusions

The demographic tendency of population decline and its ageing, as a consequence of negative natural increase and high level of migration processes, have become a usual phenomenon for the Republic of Moldova. Thus, according to official statistics, the number of population with usual place of residence declined by 272,100 thousand persons

in 2021 as compared to 2014 (or from 2869,200 thousand persons in 2014 to 2597,100 thousand persons in 2021), the Ageing coefficient increased by 5,0% (from 17,5% at the beginning of 2014 to 22,5% at the beginning of 2021), the number of labour migrants increased by 3,2% in 2018 as compared to 2014, in 2020 as compared to 2019 by 7,5% only by one year. According to the demographic forecast of the Center for Demographic Research of the National Institute for Economic Research of the Republic of Moldova for the years 2019-2040, the annual population decrease in the coming decades will increase from 1,6% to 2,3%, which will lead to a decrease of population even in the minimal variant by 34,5% by 2040. At the same time, it should be noted low indicators of economic activity and employment of working age population: with the growth of economic activity from 43,3% in 2014 to 45,9% in 2018, in 2020 given coefficient constituted 40,3% or 2,0 p.p. lower than in 2019, and the employment coefficient, growing from 41,7% in 2014 to 44,59% in 2018, constituted 38,8% in 2020 or 1,3 p.p. lower than in 2019, and there is also a predominant share of economically inactive population (59,7% of working-age population aged 15 and over) and informal employment (6,8% of hired workers). With the growth of age pensioners, the number of pensioners employed in labour market constitute 23,7%. This situation is a challenge for socio-economic policies to improve health, working conditions, increase the duration of active economic activity and stimulate employment in elder age groups, improve the quality and standard of living, perfect the pension system and others. Thus, the Law No. 105 of 14.06.2018 on promotion of employment and unemployment insurance, taking into account the situation on labour market, provides for employment measures in elder age groups, including NEAM[1] through territorial employment offices (TESM[2]) offers to working age persons aged 50 and over, (according to Art. 23, p. 3, lit. d) of above Law), various services, both informational and intermediary nature, professional training, subsidized employment or assistance in opening a personal business, through which they realize the principle of economic independence and create working places. For example, workers aged 50 and over in case of work loss, are paid the monthly benefits amounting of 30 % of the average monthly wage in economy for the previous year for a period of six months. Agricultural activity is the principal place of employment for elderly workers, including every third of them indicated a farm or agricultural land as their principal place of work, and every fourth employed in given age group worked in public social services. Moreover, in the gender aspect, 35,1% of males worked in agriculture, 16,5% in industry, 9,3% in trade and 9,1% in education. In given context, it can be noted that, in general, the working-age population in elderly age groups is employed in spheres of low productivity and labour remuneration, however the income received in the form of wages along with the pension improves the level of well-being of their family (the wage replacement rate is low and amounts to 25,5%) and also makes it possible to replenish the revenues of the State Social Insurance Budget at the expense of given category of persons as taxpayers. The share of insurance contributions of taxpayers in the structure of sources the revenue decreased from 69,5% in 2014 to 58,9% in 2020, accordingly, and transfers from the State Budget to cover needs of social insurance increased from 30,4% in 2014 to 40,2% in 2020. As follows from the above, demographic processes, changes in the structure of the working-age population and labour force market, presence of various forms of employment, including informal employment, are factors that contribute to the financial instability of the Social Insurance Budget.

In order to improve the current situation, the following is proposed:

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[1] National Employment Agency of Moldova.
[2] Territorial Employment Services of Moldova.

– based on population forecast, elaborate a medium-term forecast of labour market to assess demand and supply of labour force and identify labour reserves in order to ensure the stability and competitiveness of national labour market;

– improvement labour legislation, including removing barriers to increasing employment rates in elder age groups, ensuring equal rights and opportunities for access on labour market independently of age and gender, as well as wider application of flexible regimes of work;

– stimulating the development of formal employment of working-age population;

– development of new forms/systems of labour remuneration based on the use of foreign experience, including the EU countries;

– improvement of the pension system, including the system of facultative and other forms of non-state pension funds in the conditions of an ageing population;

– increasing the financial stability of the state social security system, including by improving the mechanism of establishing and revising pensions for different categories of pensioners, indexation of pensions, tariff rates of social contributions depending on the category and income level of working population, as well as the forecast of labour market.

The implementation of the above-mentioned measures will contribute to increasing the employment rate of working population, stability and regulation of labour market as a fundamental factor in the formation of the Social Insurance Budget on the basis of social contributions, which are the main source of its revenues, as well as ensuring its financial sustainability.

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