

IMPACT OF DEMOGRAPHIC FACTORS ON LABOUR MARKET IN THE REPUBLIC OF MOLDOVA

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ABSTRACT: *This article presents the results of the research of impact the demographic factors on the development of national labour market. The state of labour market depends on the formation of supply of working-age population and demand for qualified labour force, which is determined in quantitative and qualitative terms, which reflect natural and mechanical processes of its change. The purpose of the research is to analyze and evaluate changes in the quantity and quality of labour force by age and gender. The impact of population decline, transformation of the age structure of the population and migration processes allows to identify the main tendencies and patterns interconnected with the demographic situation in the country, as well as determine the main problems affecting the decline in labour potential, the quality and competitiveness of labour force market. The research is based on the analysis of statistical data on the number of the population with usual residence, the main indicators of employment, migration and labour income of the population. The study uses a systematic approach and such methods as comparative analysis, graphical method of interpreting tendencies in dynamics. The quantitative and qualitative evaluation of the results of the analysis showed that the reduction of labour force, the increase of the average age and the ageing of employed population, the deterioration of the quality of the modern labour market are obstacles for the desired strategic socio-economic development of the Republic of Moldova. In order to increase the competitiveness of labour market at internal and external levels, recommendations for public policies were elaborated, taking into account an integrated approach to increase the quality of human capital and the development of socio-economic infrastructure at regional and national levels. The article was developed within the framework of the institutional project “Demographic transition in the Republic of Moldova: particularities, socioeconomic implications and consolidation of demographic resilience (2024-2027)”.*

Keywords: *demographic situation, migration, population, labour force, labour market, ageing*

JEL Classification: *J11; J21; J46; J38.*

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1. INTRODUCTION

Demographic factors are one of the most important elements that influence both the development of society and the natural reproduction of the country's population, including the market of labour force. The influence of given factors on market of labour force and its reproduction is manifested through natural processes (birth, death), social (transition from one social group to another) and mechanical processes (movement from one territory/country to another or migration). The influence of demographic factors are manifested in different ways: population reproduction characterises the process of renewal of generations and has a long-term character, it is manifested gradually in time, and in this aspect it should be taken into account that reproduction means both the inflow of young generations and the outflow of population categories by age (pensioners, by disability or by death), which is a factor of growth or loss of labour force from labour market. The impact of population migration is manifested as a result and consequence of the implementation of this process and is immediately reflected in the structure of the labour force in terms of its age-sex composition and number, regional distribution. Consequently, demographic factors are an indicator for the formation and functioning of an effective labour market. The labour force or human factor, including its quantity and quality, is the key for the socio-economic development of the country, which implies the presence of a sufficient number of working-age population to ensure the development of the socio-economic system.

In the scientific literature, among the researchs in the field of population ageing it is necessary to note the important role of the French demographer A. Sauvy, according to whose opinion this factor can be forecasted and calculated, but it is quite difficult to foresee its consequences [Sauvy A., 1977]. The impact of demographic changes related with changes in the age structure and population decline, the increase in life expectancy, the process of population ageing and the decrease in the economic activity of labour force is noted in the scientific works of scientists D.E. Bloom, D. Canning, G. Fink [Bloom, D.E., Canning, D., 2004, 48 p.], [Bloom D.E., Canning, D., Fink G., 2011, 39 p.], P. Taylor [Taylor P., 2006, 236 p.], K. Lisenkova, R.W. McQuaid, R.E. Wright [Lisenkova K., Mcquaid R.W., Wright R.E., 2011, pp. 243-259]. The evaluation of labour market, taking into account demographic factors and the necessity to change the policies on employment of labour force to increase its competitiveness in labour market in Romania is presented in the works of S. Irimie, V. Băleanu, A. Ionica [Irimie S., Băleanu V., Ionica A., 2007, pp. 361-366], D.-M. Boajă [Boajă D.-M., 2012, pp. 291-295], M.-M. B. Tudor, D.-M. Voicilaş [Tudor M.-M. B., Voicilaş D.-M., 2014, pp. 57-68].

In the Republic of Moldova, demographic factors are a serious challenge for state policies for stable economic development in conditions of population decline, population ageing, migration processes and, as a consequence, a reduction in the share of young population, changes in the age-sex structure and labour force deficit and reduced competitiveness of labour force market. Given the importance of this problem, the evaluation of the impact of demographic factors on socio-economic development and the nature of labour force reproduction is given in the works of G. Paladi, O. Gagauz, O. Penina [Paladi Gh., Gagauz O., Penina O., 2009, 208 p.], [Gagauz O., 2012, p. 82-87], G. Savelieva, S. Zaharov [Savelieva G., Zaharov S., 2023, pp. 53-72], S. Zaharov. [Zaharov S., 2021, pp. 547-558]. In the conditions of demographic changes, ensuring sustainable socio-economic development of the country, including the development of a competitive labour market is a priority in adapting state policies to changes in the population structure, including its decline and ageing.

The Republic of Moldova, like many countries since the second half of the XXth century, has faced the negative impact of demographic factors on labour market. Thus, the tendency of population decline, increase of life expectancy, labour migration of working age population and high labour force turnover, decrease in the average age of exit from labour market led to imbalance and lack of labour force and reduction of its supply in labour market. In 2022, the deficit of labour force in the private sector was 65%, and its absence was declared

by 18% of respondents-employers. The analysis showed that the lack of labour force is characteristic for all regions, including the capital Chisinau (58%), the northern zone (17%), the central zone (15%), the southern zone (7%) and ATU Gagauzia (3%). [National Employment Agency, 2023a, Labour Market Forecast for 2023]. Moreover, according to the Labour Market Forecast for 2023, the deficit of labour force will remain in health, education, social assistance, information and communication, public administration, HoReCa (cooks, waiters, confectioners, etc.), as well as in the presence of blue-collar professions (seamstresses, car drivers, operators, etc.).

Consequently, the problem of the influence of demographic factors on the development of the national labour market is actual, and given its importance, the evaluation of their quantitative and qualitative influence is necessary in the elaboration and implementation of social and economic policies both to ensure sustainable development of the country and the formation of a state-guaranteed system of social protection of the population.

2. PURPOSE OF THE RESEARCH, DATA AND METHODS APPLIED

The principal purpose of present research is to analyse and evaluation the impact of demographic factors on labour force market, including its competitiveness and sustainability at the internal and external levels. Changes in the structure of labour force due to the reduction in the number and age-sex structure of population as a result of natural processes (births, deaths), migration processes, as well as the increase in life expectancy against the background of demographic ageing, all of the above-mentioned factors affect the development and competitiveness of the national labour market, including its regional components. As a consequence of demographic factors, there is both a quantitative reduction in the number of labour force, and its quality (deformation of age-sex composition and level of professional training, including its location in the territorial aspect).

As a result of these processes, the level of efficiency of labour market's functioning decreases, which, in turn, necessitates the reorientation of economic and social infrastructure due to changes in the specifics of labour force market, as well as in the consumption structure of the population due to the decline in the category of young population and the predominance of elder age population.

The purpose of given research is to analyze the nature and consequences of the impact of demographic factors on labour force market, to draw conclusions and to develop recommendations for improving the efficiency of socio-economic policies in the conditions of demographic changes in the Republic of Moldova. The above-mentioned purpose is realised through the implementation of the following objectives:

Analysis of changes in the population structure (tendencies), including the main age categories, gender, as well as in the main indicators characterising the population development.

Analysis of the age structure of employed population, evaluation of the quality of labour market by level of education and professional training depending on age.

Analysis of external labour migration, as well as internal migration processes of population movement within the country.

Evaluation of changes in the quantity and quality of working age population by age and sex, migration processes, allowed to identify the main tendencies and patterns interrelated with the demographic situation in the country, as well as to determine the main problems affecting the decrease in labour potential, quality and competitiveness of labour market.

Elaboration of conclusions and recommendations to perfect socio-economic policies to increase the sustainability and competitiveness of labour market in conditions of demographic changes.

The research was carried out on the basis of the use of complex and systemic approaches, methods of quantitative, qualitative and comparative analysis (including based on time and territorial location), authors' calculations and others.

For the analysis, official statistical data of the National Bureau of Statistics of the Republic of Moldova (NBS of RM), research materials of scientific and non-governmental organisations, indicators calculated by the authors were used. The research used the number of population with usual residence, which characterises the place where a person lived predominantly during the last 12 months independently of temporary absences (for recreation (leisure), leaves, visits to relatives and friends, business, medical treatment, religious pilgrimages, etc.).

In present article, the comparative analysis of labour market situation and indicators of labour force employment is carried out for the period from 2019 and onwards due to changes in the methodology of calculation of some indicators additionally used in the article and the sample volume of surveys conducted by the National Bureau of Statistics.

3. RESULTS

In the Republic of Moldova, sustainable demographic tendencies of population decline, demographic ageing of the population and labour migration outside the country were observed in the last years. According to the official data of the National Bureau of Statistics, the number of population with usual residence as of 01.01.2023 decreased by 2.0% (by 52.3 thousand persons) compared to the population as of 01.01.2022, including 52.7% of the population are females. The number of the population decreased by 12.4% compared to 2014, and since 2019 by 6.4%. The analysis of the age structure showed that the largest share or 65.9% of the total population is in the 15-64 age group (working age according to the Eurostat methodology applied in the EU countries), while the population of working age according to the legislation of the Republic of Moldova is 59%. The analysis of the population structure by gender component by main age groups showed that the predominant share belongs to male population in the category of under working age population (age 0-15 years) and in working age (age group 16-56/61 years). However, in the age group over working age (57/62 years and over), the share of females exceeds the male population almost twice (as of 01.01.2023, the difference was 35.8 p.p.), that is due to the excess mortality of males in working age and labour migration. The negative tendency of population decline as a result of migration processes persists in the country: according to official statistics data, in 2021 the volume of net migration increased by - 45.4 thousand persons (in 2022 it was - 43.0 thousand persons). At the same time in 2022 compared to 2021 the natural growth decreased from 16.1 thousand persons to - 9.2 thousand persons. As a result of demographic processes, including population ageing, there is a worsening of the ratio between dependent and independent categories of the population, i.e. the index of demographic dependence (the ratio of the population in the age categories 0-15 years and 57/62 years and over per 100 people of working age (16-56/61 years): as of 01.01.2023 the the index increased up to 69.4 persons compared to 60.6 persons as of 01.01.2014. At the same time, the number of the population of working age (16-56/61 years) in the total population for the analysed period tended to decrease from 62.3% as of 01.01.2014 to 59.0% as of 01.01.2023 or by 3.3 p.p. The main indicators characterising changes in the quantitative composition and structure of the population are presented in Table 1.

Table 1. Main indicators of population development, Republic of Moldova*

As of January 1	2014	2019	2020	2021	2022	2023
Population – total, persons	2869302	2684772	2643675	2626588	2565030	2512758
inclusiv						
- under working age (0-15 years old), %	19.1	19.7	19.6	19.4	19.4	19.2
- Males	51.4	51.4	51.4	51.5	51.5	51.5
- Females	48.6	48.6	48.6	48.5	48.5	48.5
- working age years (16-56/61 years old), %	62.3	59.7	59.1	59.5	58.9	59.0
- Males	51.9	52.3	52.5	51.9	51.6	50.7
- Females	48.1	47.7	47.5	48.1	48.4	49.3
- over working age (57/62+ years old), %	18.6	20.6	21.3	21.1	21.7	21.8
- Males	31.2	31.0	31.2	32.5	32.6	32.1
- Females	68.8	69.0	68.8	67.5	67.4	67.9
Population growth+, population decline-, persons	1187	- 3988	- 9883	- 16144	- 9205	...
- Urban	2210	380	-2891	-5750	-2116	...
- Rural	- 1023	- 4368	- 6992	- 10394	- 7089	...
Population growth +, population decline – as a result of international migration, net, thousand persons	- 24.2	- 37.1	- 7.2	- 45.4	- 43.0	...
Index of demographic dependence (demographic dependency ratio)	40.4	48.0	49.0	49.6	50.6	51.7
0 – 14 years old	25.1	27.6	27.5	27.4	27.5	27.4
65 years old and over (65+)	15.3	20.4	21.5	22.1	23.0	24.4
Index of demographic dependence*	60.6	67.5	69.3	68.1	69.7	69.4

* Notes: Number of persons of non-working age (0-15 years, 57/62 years and over) per 100 people of working age (16-56/61 years).

The population is calculated based on the international definition of usual residence, which is defined as the place where a person has lived predominantly during the last 12 months independent of temporary absence (for the purpose of recreation, leaves, visits to relatives and friends, business trips, medical treatment, religious pilgrimage, etc.).

From 01.01.2019 the retirement age is raised: males - 63 years, females - 58 years;

From 01.01.2021 the retirement age for females 59 years, and from 01.01.2023 - 60 years.

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

The process of population ageing in the Republic of Moldova became irreversible, and stronger impact in rural and on female population. As of 01.01.2023, the ageing rate constituted 23.8% on average in the country and 25.4% in rural, with a gender criteria indicator impacts to the female population (27.1% for females and 20.1% for males, respectively). At the same time, the population categories in the elder age groups are increasing, for example, as of 01.01.2023,

the population in the age category 65-69 years increased by about 2% compared to 01.01.2022, and, accordingly, the population in the age category 70-74 years increased by 8.0%.

**Table 2. Demographic ageing of the population, Republic of Moldova
(at the beginning of year)**

As of January1	2014	2019	2020	2021	2022	2023
Mean Average age of population, years	37.4	38.9	39.3	39.6	39.9	40.3
- Males	35.7	37.1	37.4	37.6	37.9	38.4
- Females	39.0	40.6	41.0	41.3	41.7	42.1
Ageing coefficient (Population ageing rate), %	17.5	20.8	21.7	22.4	23.0	23.8
- Males	14.5	17.5	18.3	18.8	19.4	20.1
- Females	20.3	23.9	24.9	25.6	26.3	27.1
- Urban	16.7	20.0	20.6	21.0	21.2	21.7
- Rural	18.1	21.5	22.5	23.3	24.3	25.4

Source: NBS, www.statistica.md

The process of population ageing is taking place against the background of an increase in life expectancy at birth, which is also due to a decrease in the crude mortality rate of males and females. At the same time, there are some gender differences related to life expectancy, including the fact that females live on average 8.6 years longer than males, as well as the fact that life expectancy is decreasing at both sexes, and the gap between the sexes at elder ages decreases. The analysis NBS statistical data for 2022 shows that the average life expectancy at the age of 60 for females was 19.6 years and for males 14.9 years or by 4.7 years less, for females who reached the age of 65 the average life expectancy was 15.7 years and respectively for males of the same age 12.0 years or 3.0 years less, and for females at the age of 85 the average life expectancy was 4.0 years and for males respectively 3.5 years or the difference decreased and is up to 0.5 years. Indicators characterising the life expectancy of males and females, including the remaining years of life at the age of 45, 50, 55, 60, 65, 70 and 75, are reflected in Table 3.

**Table 3. Life expectancy and mortality indicators of the adult population,
Republic of Moldova**

As of January1	2014	2019	2020	2021	2022
Life expectancy at birth, years	69.4	70.9	69.9	69.0	71.4
- Males	65.3	66.8	66.0	65.1	67.1
- Females	73.7	75.2	73.9	72.9	75.7
45 years	27.8	29.1	28.0	27.0	29.2
- Males	24.5	25.6	24.7	23.9	25.7
- Females	31.0	32.4	31.1	30.0	32.7
50 years	23.9	25.0	23.9	22.9	25.1
- Males	20.9	21.9	20.9	20.1	21.9
- Females	26.6	27.9	26.8	25.6	28.2
55 years	20.2	21.2	20.1	19.1	21.2
- Males	17,6	18,4	17,4	16,6	18,2
- Females	22.4	23.6	22.6	21.4	23.8

As of January ¹	2014	2019	2020	2021	2022
60 years	16.7	17.6	16.6	15.6	17.5
- Males	14.6	15.3	14.2	13.4	15.0
- Females	18.5	19.5	18.6	17.4	19.6
65 years	13.6	14.3	13.4	12.4	14.1
- Males	12.0	12.5	11.4	10.7	12.1
- Females	14.8	15.7	14.9	13.8	15.7
70 years	10.6	11.3	10.5	9.6	11.0
- Males	9.5	10.0	9.0	8.3	9.5
- Females	11.3	12.2	11.5	10.5	12.0
75 years	8.1	8.4	7.9	7.1	8.2
- Males	7.4	7.5	6.9	6.2	7.2
- Females	8.5	8.9	8.4	7.7	8.8
Crude Birth rate, per 1000 people, ‰	14.2	12.2	11.7	11.3	10.6
Crude mortality rate (per 1000 people), ‰	13.8	13.7	15.5	17.5	14.2
- Males	15.1	15.2	17.1	19.0	16.0
40 -44	7.6	7.7	7.9	7.1	6.2
45 – 49	12.2	10.5	10.4	11.3	10.3
50 - 54	17.7	15.3	15.3	16.2	13.5
55 - 59	24.4	22.5	23.4	24.7	20.9
60 - 64	35.5	31.2	34.5	37.0	31.2
65 - 69	47.6	45.1	51.1	56.8	46.0
70 - 74	69.7	57.7	73.1	80.5	63.7
- Females	12.7	12.3	14.0	16.2	12.6
40 - 44	3.2	2.6	2.9	2.5	2.3
45 - 49	4.5	3.3	4.5	4.3	3.2
50 - 54	6.5	5.7	6.7	6.4	4.8
55 - 59	10.5	8.5	9.8	10.2	7.3
60 - 64	15.3	13.3	15.0	17.7	12.1
65 - 69	24.0	21.0	24.4	29.2	19.1
70 - 74	44.5	31.8	38.9	47.3	34.2

Source: NBS, www.statistica.md

According to data of official statistics, in 2022, the crude mortality rate in the Republic of Moldova was 14.2 ‰ and decreased compared to 2021 (in 2021 - 17.5 ‰, with a 16.0‰ for male (in 2021 - 19‰) and 12.6‰ for females (in 2021 - 16.2‰)). In 2022, as before, there was a male excess mortality or 114 males' deaths per 100 female deaths. The largest share in the causes of mortality are diseases of the circulatory system and tumours, both in males and females (in 2022, the share of these causes was 74.0%, including 69.3% for males and 79.1% for females). However, it should be noted that the mortality rate under one year of age is 9.6 deaths per 1,000 live births of boys, compared to 8.4 deaths per 1,000 live births of girls and also compared to 8.9 deaths per 1,000 live births of boys in 2021. Compared to 2021, the infant mortality rate increased to 7.7 deaths of boys in 2022, compared to 3.3 deaths per 1,000 live births of girls (NBS, 2023a). As follows from the analysis of data in Table 3, the crude mortality rate exceeds the total fertility rate for the period 2019-2022.

Demographic factors influence the labour market, firstly, through changes in the quantitative supply of labour force and, secondly, through changes in the qualitative

composition of labour force (age, gender component, professional level of training, etc...). Given processes lead to changes in the ratio between economically active and economically inactive population, including changes in the tendencies of labour force reproduction, and to imbalance of labour market.

Table 4. Characteristics of economically active and economically inactive population, Republic of Moldova

	2014	2018	2019	2020	2021	2022
Population (15 and over), thousand persons (in relation to labour force market)	2356.0	2220.2	2175.2	2150.9	2120.6	2130.1
Economically inactive population, thousand persons	1336.4	1202.1	1 255.9	1 283.6	1 248.9	1 240.1
Share of economical ly inactive population, % of working age population*	56.7	54.1	57.7	59.7	58.9	58.2
- Males, %	44.0	43.1	42.7	41.6	42.4	43.0
- Females, %	56.0	56.9	57.3	58.4	57.6	57.0
- Urban, %	38.8	40.4	34.6	35.5	35.2	34.1
- Rural, %	61.2	59.6	65.4	64.5	64.8	65.9
Structure of economically inactive population by main age groups, %						
15-24 years	25.6	20.6	18.5	17.8	17.6	17.7
25-34 years	16.4	17.3	14.9	15.0	14.3	14.0
35-44 years	9.5	11.3	11.3	11.6	11.6	12.1
45-54 years	10.1	9.5	10.0	10.3	10.2	9.8
55-64 years	17.1	16.6	18.0	17.5	17.0	16.5
65 years and over	21.3	24.7	27.2	27.8	29.3	29.9
Structure of economically inactive population by inactivity category, %						
- pupil, student	17.6	15.0	13.1	13.4	13.5	13.4
- pensioner	40.3	42.1	45.1	45.2	46.7	46.8
- housewife (householder)	11.1	11.3	13.0	13.1	13.3	13.2
- other situations	19.8	19.3	20.4	21.3	20.1	19.1
- went to work abroad	11.2	12.3	8.4	7.0	6.3	7.5
Structure of economically inactive population in relation to labour market, % of the economically inactive population:						
- looking for, but not available for work	0.1	0.1	0.2	0.04	0.04	0.1
- not looking for, but available for work	1.1	0.5	1.2	0.7	0.7	0.7
- wants to work, but is not looking for and is not available for work	0.2	0.6	0.5	0.7	0.2	0.7
- not looking for and not unavailable for work	87.4	86.5	89.7	91.8	92.8	91.0
- went to work abroad	11.2	12.3	8.4	7.0	6.3	7.5

	2014	2018	2019	2020	2021	2022
Economically active population, thousand persons	1019.6	1018.1	919.3	867.3	871.6	890.0
Share of economically active population, % of working age population*	43.3	45.9	42.3	40.3	41.1	41.8
Economic activity rate, %	43.3	45.9	42.3	40.3	41.1	41.8
- inclusive main age groups, %						
15-24 years	20.6	22.5	21.2	18.3	18.1	17.7
25-34 years	52.6	52.5	55.2	52.1	53.5	53.5
35-44 years	65.2	63.2	61.2	59.9	61.4	61.3
45-54 years	65.2	66.4	62.2	60.0	61.2	63.7
55-64 years	42.4	49.4	42.2	41.7	43.8	45.2
65 years and over	9.0	17.5	7.6	6.6	5.3	5.8
Economically inactive/active population, persons	1.31	1.18	1.37	1.48	1.43	1.39
* working age population, 15+						

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

As follows from the analysis of data on the dynamics of change in working-age population, its number decreased by 5.8% in 2014 and in 2019-2022, respectively, by 2.1%. This tendency also takes place in the case of the economically inactive population, the decrease in the number of which amounted to 9.1% in 2014-2018 and 11.3% in 2019-2022. However, it should be noted that in the case of the economically active population in the period 2014-2018 its number by the end of the period practically remained at the same level, and the period 2019-2022 decreased by 3.2%. In the structure of the economically inactive population the share of elderly population in the age category of 65 years and over increased (by 8.6 p.p. compared to 2014 and by 2.7 p.p. compared to 2019), in given category the share of pensioners has the highest value (46.8%) and has a stable growth tendency throughout the period. Considering from the point of view of residence place, the rural population is characterised for above category of population (its share predominates and amounts to 65.9%, and the share of urban population - 34.1%), by gender in economically inactive population the predominant share is females (57.7%), the share of males - 43.0%.

Analyzing the economically inactive population as a possible reserve for providing the necessary labour force in labour market, it should be noted that in relation to labour market in 2022, the share of 91.0% was the population that is not looking for and does not want to work and 7.5% were labour migrants working outside the country, that is, the remaining 1.5% or 18.6 thousand persons are those who are looking for work or not looking for work, as well as those who do not want to work. Thus, practically from the category of inactive population it is difficult to determine the possibility of covering the necessary labour market requirements for labour force. Moreover, a negative factor is the predominance of the share of inactive population in the population 15 years and over (working age population), or its share in 2022 was 58.2% compared to 41.8% of the economically active population. Coefficient of economic activity decreased from 43.3% in 2014, 45.9% in 2018 to 41.8% in 2022, and the ratio between the economically inactive and active population in 2022 was 1.39. Highest economic activity is characterised for the age categories 45-54 years (63.7%). 35-44 years (61.3%), 25-34 years (53.5%), 55-64 years (45.2%), and for youth in the age category 15-24 years economic activity

is the lowest (17.7%). The main indicators characterising changes in the number and structure of working age population aged 15 and over are shown in Table 4.

The analysis of statistical data allows to conclude that in the period from 1991 to 2023, population decline was noted in 9 out of 15 former republics, but the Republic of Moldova was ahead of the post-Soviet countries and in it the process of population decline was the most irreversible, the decline was 41.4%, or from 4.3 million to 2.5 million persons (for example, in Lithuania by 32.4%, Latvia by 30.8%, Georgia by 20.8%, Armenia by 14.3%, Estonia by 13.3%). Thus, according to the NBS data, the preliminary number of population with usual residence as of 01.01.2023 (excluding the Transnistrian region) was 2512.8 thousand persons or 2.0% less as compared to 01.01.2022 (including the number of males decreased by 2.5% and females by 1.6%). At the same time, in the absence of economic stability and clear prospects for the country's development, the working age population continues to leave for work outside the country, i.e. there are processes of labour migration, which is one of the components of the economically inactive population. The main indicators characterising the migration of working age population are reflected in Table 5.

Table 5. Characteristics of labour migration, Republic of Moldova

	2014	2018	2019	2020	2021	2022
Labour migrants, thousand persons	149.8	147.4	105.9	90.4	79.0	93.0
including						
- Males, %	71.6	69.7	73.3	72.2	73.2	75.5
- Females, %	28.4	30.3	26.7	27.8	26.8	24.5
- Urban, %	22.4	29.3	22.0	25.0	29.5	26.8
- Rural, %	77.6	79.7	78.0	75.0	70.5	73.2
Structure of labour migrants by main age groups, % of the total number						
15-24 years	27.7	18.9	19.2	19.4	17.6	17.5
25-34 years	35.3	38.3	31.6	34.3	33.0	32.0
35-44 years	19.5	23.5	27.1	22.2	24.2	28.1
45-54 years	13.6	14.5	17.1	16.9	18.4	16.2
55-64 years	3.8	4.7	4.8	6.7	6.2	5.8
65 years and over	0.1	0.1	0.2	0.5	0.6	0.4
Structure of labor migrants in the regional aspect, %						
RM, %	100.0	100.0	100.0	100.0	100.0	100.0
Mun. Chişinău	7.6	9.7	8.6	13.0	11.0	11.5
North zone	30.1	22.1	22.9	24.0	26.7	28.1
Central zone	33.0	40.3	41.4	39.2	38.3	36.4
South zone	29.3	27.9	27.1	23.8	24.0	24.0
Structure of labour migrants by education level, %						
RM, %	100.0	100.0	100.0	100.0	100.0	100.0
Higher	10.1	10.5	12.0	13.8	11.8	12.0
Secondary special	11.0	9.8	12.7	11.3	10.4	11.5
Vocational						
Primary (secondary) vocational education	26.9	28.5	28.1	31.9	28.4	30.6
Lyceum, general secondary	21.9	21.6	17.2	15.7	17.8	17.0
Gymnasium	29.5	29.0	29.9	27.2	30.2	28.0
Primary school or without	0.6	0.6	0.1	0.1	1.4	0.9

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

The migration of working age population in the Republic of Moldova explained by changes in socio-economic processes, development of market relations, cancellation of visa regime for citizens of the Republic of Moldova, etc. Some sources of information note that approximately a quarter of the country's population is temporarily or for a long period of time outside the country to work in order to improve their financial situation or to stay for permanent residence [Vremiş M., Vladicescu N., 2020]. According to statistical data [NBS, 2019] the Republic of Moldova left about 160 thousand persons, and the number of those who returned to the country was 110 thousand persons, i.e. the negative balance of migration flows is 50 thousand persons (data available only for 2017). In principle, EU countries are attractive for labour migration (including by the level of mastery/proficiency, knowledge of the country's language) and with proper management of migration processes one can benefit from the investments of migrants in the development of socio-economic infrastructure both at the local and national levels. However, this is possible if labour migrants are a desire to return home, including the use of their experience gained abroad in economic activities, investment of savings in the economy, education, health, creation of cultural heritage, etc.

In the analysed period 2014-2021, the number of labour migrants tended to decrease, including in 2018 compared to 2014 - by 1.6%, in 2021 compared to 2019 - by 25.4%, but in 2022 their number increased by 17.7% compared to the previous year. According to data of official statistics, the share of males tended to increase and is predominant (75.5% in 2022) compared to the share of females migrants (24.5%), and for the last three years there has been a tendency for them to decrease. *On the basis of place of residence*, the rural population prevails in the migrant population (73.2%), but starting from 2018, its share in 2022 decreased by 6.5 p.p. in 2022.

The structure of labour migrants by main age groups has changed. Thus, the tendency towards a reduction in migrants among youth is clearly highlighted: if the age group 15-24 in 2014 was 27.7%, in 2022 its share fell to 17.5%, or by 10.2 p.p., the share of the 25-34 age group decreased from 35.3% in 2014 to 32.0% in 2022, or by 3.3 p.p.. Against the background of a reduction in youth migrants, the tendency towards an increase in migrants in the middle most productive age with professional skills clearly determined. So, the number of migrants in the 35-44 age group increased by 8.6 p.p. and by 2.6 p.p. in the 45-54 age group, as well as by 2.0 p.p. in the elder 55-64 age group. *In territorial aspect*, the Central zone has the main share (36.4%) and, despite the tendency for its share to decrease, in the Northern Zone (28.1%). At the same time, the share of Chisinau migrants increased to 11.5% in 2022, that is, from the country's capital, in which there are the best chances to get an education, the necessary profession and to be job placed, but nevertheless the migration from the municipality of working-age population is increasing, including the largest share (65.1%) in 2022 was constituted of two age categories: the age group 35-44 years (the number of which increased by 27.6% in the last four years and the share was 34.9%) and the age group 25-34 (the number of which increased by 10.3% in 2022 compared to 2019 and the share was 30.2%). The share of the 45-54 age group was 18.9%, while the share of migrants of the 15-24 age group was 8.5% (its number decreased by 18.2% in 2022 compared to 2019) and the 55-64 age group - 7.5% (the number of migrants of given group increased by 33.3% in 2022 compared to 2014). *By education level*, the main share included the population with vocational education (30.6%), gymnasium education (28.0%), graduates of lyceums and with general secondary education (17.0%).

An important feature of migration processes is the quantitative and qualitative change in the structure of working age population, which affects the reproduction of labour force in the national labour market and makes adjustments to the indicators of the structure of employed population, including the main indicators of employment of labour force. The characteristics of employed population in dynamics, including quantitative changes in the age structure, the

ratio of males and females in labour market, and the distribution of employed in urban and rural, is presented in Table 6.

Table 6. Characteristics of the structure of employed population, Republic of Moldova

	2014	2018	2019	2020	2021	2022
Economically active population, thousand persons	1019.6	1018.1	919.3	867.3	871.6	890.0
Employed population, thousand persons	869.7	794.1	872.4	834.2	843.4	862.3
Employment rate, %	41.7	44.5	40.1	38.8	39.8	40.5
- Males	44.8	48.1	44.2	43.1	44.7	44.7
- Females	38.9	41.4	36.5	35.0	35.4	36.8
- Urban	43.6	43.0	47.0	44.4	45.6	47.3
- Rural	40.3	45.5	35.6	35.1	36.0	36.1
Share of employed population in economically active population, %	85.3	78.0	94.9	96.2	96.8	96.9
Structure of employed population by main age groups, %	100.0	100.0	100.0	100.0	100.0	100.0
15-24 years	8.5	6.9	6.4	5.5	5.2	4.9
25-34 years	24.7	24.1	24.9	24.2	23.7	22.6
35-44 years	23.4	24.8	24.4	25.6	26.5	26.8
45-54 years	25.1	23.4	22.8	23.0	23.2	24.0
55-64 years	16.3	17.9	18.2	18.7	19.0	19.1
65 years and over	2.1	2.9	3.2	3.0	2.4	2.6
Pensioners by age in labour market, % (at the end of the year)	22.5	23.0	23.4	23.7	24.0	23.5
- Males, %	40.3	44.3	43.8	44.0	44.6	46.0
- Females, %	59.7	55.7	56.2	56.0	55.4	54.0
Pensioners/Employed population, persons	0.77	0.89	0.80	0.82	0.80	0.78
Structure of employed population by education level, %						
RM, %	100.0	100.0	100.0	100.0	100.0	100.0
Higher	26.4	27.2	27.9	28.3	27.9	28.3
Secondary special	14.4	14.0	14.6	14.3	14.1	14.0
Vocational education Primary (secondary) vocational education	23.6	22.2	22.7	22.6	22.7	23.1
Lyceum, general secondary	18.6	18.7	17.7	17.6	16.6	16.0
Gymnasium	16.5	17.6	16.7	17.0	18.5	18.3
Primary school or without	0.5	0.3	0.4	0.2	0.2	0.3

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

Against the background of the general tendency of population decline, the employed population also tends to decrease, including in 2018 by 8.7% compared to 2014, in 2022 by 1.2% compared to 2019. However, during the period 2020-2022, there was an growth tendency in employed population, including in 2022 by 3.3% compared to 2020 and by 2.2% compared to 2021. The main share of employed population includes males (51.5%) and rural population (54.4%). Analyzing the employed population (or labour force in labour market) by main age groups, it can be noted that as a result of demographic processes (population decline, male excess mortality, increase in life expectancy, migration processes), the employed population is ageing, including a decrease in the share of youth in the age categories 15-24 years (in 2022,

by 3.6 p.p. compared to 2014 and by 1.5 p.p. compared to 2019) and 25-34 years (in 2022 by 2.1 p.p. compared to 2014 and by 2.3 p.p. compared to 2019). At the same time, the tendency of population growth in the age categories 55-64 years and 65 years and over became irreversible (labour force in the above age categories in 2022 increased by 16.3% and by 25.6% in compared to 2014), including an increase in the share of employed population in the 55-64 age category (by 2.8 p.p. in 2022 compared to 2014 and by 0.9 p.p. compared to 2019), and also the share of employed population aged 65 and over in 2022 increased by 0.2 p.p. in compared to the previous year. The share of pensioners by age in labour market over the last three years is about 24%, with a predominant share of females (54%). According to the National Bureau of Statistics [NBS, 2023b], 20.8% of labour force was occupied in agricultural sector in 2022, and 79.2% in non-agricultural economic activities, including 14.8% of employed population in industry (14.4% in 2021), in construction (7.7% in 2021), and the share of employed population in services increased by 0.3 p.p. compared to the previous year and accounted for 56.7% of total employed population (56.4% in 2021). Figure 1 shows the characteristic of changes in the structure of employed population by the main sectors of the national economy in 2022 compared to 2014.

Figure 1. Structure of employed population by age groups in the context of the main types of economic activity, 2014, 2022



Source: authors' calculations on the basis of NBS data, www.statistica.md

An analysis of labour force structure by the main types of economic activities allowed to formulate the following conclusions: in 2022 compared to 2014, the reduction in the share of youth group is characteristic of almost all types of economic activities. The most significant decrease of employed in the age group 15-24 years is registered in the field of agricultural activities, forestry and fisheries (by 4.41 p.p.), wholesale and retail trade, accommodation and public catering activities (by 4.01 p.p.), construction (by 3.29 p.p.). The decrease in the share of youth aged 25-34 is mainly characteristic of the construction sector (by 6.87 p.p.) and wholesale and retail trade, accommodation and public catering activities (by 6.97 p.p.), it explains the possibility of job placement of population given age group abroad (as labour migrants, the data in Table 5 confirm this supposition, as given age group remains the largest share or more than 30% of total number of migrants throughout the analysed period). Against the background of a decrease in employed population in youth age groups, the process of ageing of labour force is going, including an increase in the share of employed population in the age groups 55-64 years and 65 years and over. Thus, the share of the 55-64 age group in the field of agriculture, forestry and fisheries in 2022 increased by 3.01 p.p. as compared to 2014 and its share is 24.37% of total number of employed in the mentioned sphere, in industry, respectively, it increased by 2.39 p.p. and is 16.93%, in wholesale and retail trade, activities in the sphere of accommodation and public catering - its growth was 3.07 p.p. and its share constitutes only 13.03%, in the sphere of public administration, education, health and social assistance - the growth of 5.84 p.p. was registered and the relative share of this group is 25.43% and is one of the prevailing ones in total number of employed in this sphere. Moreover, it should be noted the tendency of increase of employed population in the age group of 65 years and over in 2022 compared to 2014, including in industry (by 0.94 p.p., the share of employed 1.33%), in wholesale and retail trade, in the sphere of accommodation and public catering activities (respectively, by 0.94 p.p., share of the employed 1.70%), in the field of public administration, education, health and social assistance (respectively, by 0.97 p.p., share of the employed 3.09%), and in the field of agricultural activity, forestry and fisheries the share of employed in the age group of 65 years and over remains the highest throughout the period 2014-2022 and constitutes the relative share - 4.29%. As follows from the analysis, the largest share of employment in elder age groups is characteristic of the types of activities with predominance of professional skills and knowledge, education level, and for the types of economic activities that are in connection with health risks, with physical loading, i.e. with the health factor, there are softer tendencies of increase in the number of employed workers and their predominant share compared to the younger age categories of workers.

Ageing of labour force market and its age structure are a challenge for public policies to ensure stability and competitiveness of labour market, a balanced of supply and demand for labour force in the conditions of transformational economy. Given situation is confirming by the analysis of the structure by education level. Thus, in labour market, the labour force with higher education has the main relative share (28.3%), including throughout the analyzed period the share of specialists with vocational and secondary special education practically remains at the same level. One of the reasons for given situation is labour migration, the share of labour migrants with the above-mentioned levels of education is 42% (Table 5, 30.6% and 11.5%, respectively). At the same time, blue-collar professions have an advantage in job placement of unemployed. Thus, for example, in 2022, 7.1 thousand persons or 34.5% out of 20.6 thousand unemployed job placed in *blue collar professions*, in 2019, 6.5 thousand or 36.3% out of 17.9 thousand persons job placed, and only 1.1 thousand persons or 15.5% out of 4.1 thousand persons job placed in *white collar professions* [NBS, 2023c, p.105]. Moreover, according to the National Employment Agency data, during 2022, 35 thousand unemployed persons were registered in the presence of 32.1 thousand vacancies, including 81% of the total number of

vacancies were intended for professions for workers (*blue collar*) in the service sector and real economy sector [National Employment Agency, 2023b, p. 2-3].

It should be noted a positive tendency of reduction in the number of employed in the informal sector: in 2022, there are 16.4% employed population or 0.5 p.p. less than in 2021 (16.9%), and the share of employed in informal work places decreased by 0.8 p.p. (22.0% compared to 22.8% in 2021). The main share of employed in informal sector is in the agricultural sector or 63.4 per cent (65.0 per cent or 1.6 p.p. more in 2021). In the non-agricultural sector, informal employment in 2022 decreased insignificantly (by 0.2 p.p.) to 11.1% compared to 11.3% in 2021, including mainly in the construction sector (66.3% of employed in given type of economic activity) [NBS, 2023d].

Table 7 presents the characteristics of employed population in the informal sector.

Table 7. Structure of employed population, informal sector

	2014	2018	2019	2020	2021	2022
Employed population, informal sector, thousand persons	160.2	145.9	146.8	139.5	142.9	141.3
Share of employed population, informal sector:						
- Males, %	61.6	60.4	66.6	68.3	67.9	68.0
- Females, %	38.4	39.6	33.4	31.7	32.1	32.0
- Urban, %	18.9	19.9	21.0	18.8	19.8	21.1
- Rural, %	81.1	80.1	79.0	81.2	80.2	78.9
Structure of employed in the informal sector by main age groups, %						
Total, %	100.0	100.0	100.0	100.0	100.0	100.0
15-24 years	9.4	7.5	6.9	5.9	7.2	4.5
25-34 years	22.2	23.6	24.5	22.4	21.3	21.9
35-44 years	23.6	24.7	21.7	25.2	25.9	24.7
45-54 years	23.6	21.5	22.8	22.5	24.4	26.6
55-64 years	16.7	17.1	17.8	19.7	17.6	17.7
65 years and over	4.5	5.6	6.3	4.3	3.6	4.6
Structure of employed population in the informal sector by economic status, %						
Total, %	100.0	100.0	100.0	100.0	100.0	100.0
Hired workers	5.1	4.5	5.4	4.6	3.9	4.9
Self-employed	82.9	75.4	76.4	76.1	76.1	77.6
Unpaid family workers	12.0	20.1	18.1	19.2	20.0	17.5
Patrons, members of cooperatives	-	-	0.1	0.1	-	-
Structure of employed population by type of organizational and legal form, %						
Total, %	100.0	100.0	100.0	100.0	100.0	100.0
Formal sector enterprises	72.0	65.3	82.8	83.1	82.9	83.3
Informal sector enterprises	16.3	14.8	16.8	16.7	16.9	16.4
Households that produce products for their own needs	11.4	19.7	-	-	-	-
Households that use hired labour (hired labour force)	0.3	0.2	0.4	0.2	0.2	0.3

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

In the informal sector, there is a clear marked tendency of raising in the share of males (by 1.4 p.p. over the past four years), which is 68.0% in 2022 (the share of females decreased by 1.4 p.p. over the period 2019-2022 and is 32%). The main employment in the informal sector is specific to rural areas (about 80% of employed in informal activities are in rural). The analysis of employed in the informal sector by economic status over the period 2014-2022

allowed to conclude that the decreasing tendency of the relative share of self-employed workers in 2018 by 7.5 p.p. compared to 2014 remained almost at the same level or 77-78% in 2019-2020. The share of employees has acquired a decreasing tendency, but in 2022 compared to 2019 again it can be note its growth by 1.0 p.p. The structure by main age groups has an important role in the maintenance and functioning of informal activities. The main relative share in the number of employed in the informal sector or 73.2% constitute the most productive age groups, including 45-54 years (26.6%), 35-44 years (24.7%) and 25-34 years (21.9%), which, in turn, contributes to the reduction of labour force in the formal labour market in conditions reduction in number and ageing labour force. Considering the fact that the specific of employment in the above-mentioned sector is, as a rule, the absence of individual labour contracts and work by oral agreement, social insurance contributions for social and health insurance are not transferred, no payment for workers' leave and disabled are not paid, all this is a lack of guarantees for the provision labour activities and social protection, a risk to poverty and the possibility of obtaining the right to pension insurance (if the worker does not have an individual agreement on the transfer of insurance contributions to social security). Consequently, the presence of informal employment in the country under conditions of demographic changes, which affects the labour market, is a challenge for the implementation of adequate public policies aimed at stabilizing and increasing the competitiveness of national labour market.

Demographic factors influence both the labour force market and indirectly the income received and, consequently, the standard of living of working age population. Thus, the age composition of the working age population, the place of residence (urban, rural), gender (male, female) largely affects the source of income receipt and the sphere of economic activity.

The analysis of disposable incomes of the population by the main age groups allowed to achieve the following conclusions:

- the growth of income per household member over the last four years on average in the country is registered by approximately 1.5 times, which is characteristic of almost all main age groups;

- the main source of household income in age groups up to 59 years is wage, the share of which is 60 % and more, depending on the age of the household head;

- in elder age groups, the predominant source of income is social benefits, including pensions. However, in the 60-64 age group, the share of wages (up to 39%) remains as a source of income, while social benefits is 36.2% as a source of income and pension, respectively, has only a share of 30.7%. In the elder age group of 65 years and over, the main source of income is social benefits (70.6%), the share of pension is predominant and amounts to 63.3% in the structure of total income;

- for all age groups the source of non-labour income is remittances from labour migrants, which allow to cover the requirements of households in priority needs (payment of utilities, children's education, medical service, etc.), given source has the largest share in income in the age groups of 30-39 years (18.6%), 40-49 years (15.1%) and under 30 years (14.3%);

- the lowest income per household member is registered in the households of pensioners in the age group of 65 years and over: the income is 91.5% of the national average, 88.1% for the age group of 60-64 years and 75.5% for the income of households in which the head of household is in the age group under 30 years of age.

The structure of disposable average monthly income of one household member is presented in Table 8.

Table 8. Structure of average monthly disposable income of one household member by main age groups of the household head and sources of income*

	Total	Up to 30 years	30 - 39 years	40 - 49 years	50 - 59 years	60 - 64 years	65 years and over
Average monthly disposable income of one household member, MDL							
2019	2880.6	3511.8	2 816.4	2 739.5	3 098.0	2 864.7	2 602.6
2020	3096.6	4129.2	2 971.5	2 839.4	3 409.5	3 132.7	2 794.8
2021	3510.1	4108.3	3 318.3	3 472.1	3 839.5	3 627.9	3 047.8
2022	4252.6	5153.1	4 390.6	3 956.9	4 440.9	4 417.5	3 891.3
Including - wages, % of total income							
2019	50.2	56.6	60.8	57.4	59.2	36.4	16.4
2020	50.2	62.6	58.9	60.0	56.8	39.7	14.0
2021	50.8	60.3	58.6	58.7	59.2	44.0	13.7
2022	50.7	62.2	59.9	59.4	60.8	38.9	14.3
- from social benefits / from its pension, % of total income							
2019	18.7	3.9	6.4	6.3	11.0	35.6	61.8
	14.4	0.2	1.0	3.2	7.9	30.7	55.4
2020	19.4	4.6	6.7	6.7	11.6	34.7	65.0
	14.5	0.3	1.0	3.2	8.7	28.5	56.8
2021	18.5	6.3	7.0	4.8	10.1	32.7	66.3
	14.0	0.7	1.2	2.0	6.5	28.3	59.0
2022	20.3	5.9	5.7	6.5	9.2	36.2	70.6
	15.8	0.3	0.6	3.1	6.5	30.7	63.3
- from other sources / from its - remittances, % of total income							
2019	15.7	26.3	19.2	16.1	13.1	12.5	11.1
	12.4	20.5	14.2	13.8	11.6	9.6	6.7
2020	15.6	22.7	17.5	15.7	16.2	10.6	11.3
	12.9	18.4	14.3	13.3	14.9	8.6	7.2
2021	15.0	23.6	16.4	17.2	13.4	10.4	10.8
	12.5	20.1	13.2	15.3	11.8	8.3	7.6
2022	14.8	20.0	22.5	18.4	11.3	8.9	6.2
	12.0	14.3	18.6	15.1	10.0	7.5	4.2
Absolute poverty rate depending on the age of the head of household, %							
2019	25.2	12.9	19.2	24.5	22.0	28.8	40.8
2020	26.8	16.7	22.3	23.3	26.2	28.5	41.1
2021	24.5	15.4	18.6	23.3	21.1	26.6	39.7
2022	31.1	22.2	21.3	28.5	30.4	34.2	48.1
Absolute poverty rate depending on a person's age, %							
	Total	Up to 18 years	18-29 years	30-39 years	40-49 years	50-59 years	60 years and over
2019	25.2	24.0	21.6	19.2	23.8	20.7	36.8
2020	26.8	26.0	21.6	21.2	23.1	24.8	37.2
2021	24.5	24.4	18.1	19.6	21.3	19.3	35.9
2022	31.1	28.4	23.6	23.1	29.3	28.5	43.9
- including distribution of poor population, age group, 2022, %	100,0	20,3	7,2	9,1	13,5	16,4	33,5

Characteristics of age structure of household member, place of residence, 2022, %							
	Total	Up to 18 years	18 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60 years and over
Total	100.0	22.2	9.6	12.3	14.4	17.8	23.7
-Urban	100.0	25.4	12.9	16.5	13.4	13.0	18.7
-Rural	100.0	20.1	7.4	9.5	15.0	21.0	27.0

**Note: Data are not comparable with the previous period due to the change in the NBS methodology since 2019.*

Source: NBS, www.statistica.md

Table 8 shows that the absolute poverty rate increased over the analysed period, including the absolute poverty rate of households with the age of its head in the age group 60-64 years and, especially, 65 years and over exceeds the national average (by 3.1 p.p. and by 17.0 p.p., respectively, in 2022). These households are mainly located in rural areas (27%). Considering the more pronounced process of population ageing in rural areas (25.4% compared to 21.7% in urban areas) and the poverty of the elderly population, public policies should be adequate to the ongoing demographic changes and, especially, taking into account the requirements of labour force market, the possibilities of using the above-mentioned categories to cover the labour force needs of the rural infrastructure and provide additional sources of income through employment in labour market, including improving the standard of living of given categories of population.

The low level of labour income and the desire to improve the material well-being of the family and provide a possibility to receive a quality education for children is one of the main factors of labour migration. It should be noted that migration processes directly affect the labour force market. At the same time, considering the migration as a means of exchanging professional skills acquired abroad is a positive factor for the socio-economic development of the country. However, on the other hand, given processes lead to a reduction in the economically active population due to changes in the age and sex structure of population, to an increase in the requirements to use earned money, which contributes to the violation of monetary and consumer balances. At the same time, it can be note such factors - consequences of migration as the desire to hide income received outside the country, deterioration of migrants' qualifications and the necessity to retrain them taking into account the changed needs of the country. The above-mentioned factors are negative and require effective decisions on the part of state authorities to prevent undesirable consequences for the economy, including to ensure demand for qualified personnel and sustainable equilibrium in labour market. One of the solutions to the above-mentioned problems is the organisation of effective management in the field of labour remuneration organisation. This is due to the fact that in the conditions of market economy the development on labour market there is competition between market and non-market principles, which allow employers to hire professionally trained workers based on the use of attractive rates and bonus systems, additional rewards for the quality of work and various benefits. At the same time, the low level of wages according to the legally adopted remuneration system and existing restrictions in the labour legislation on the recruitment of workers in the Republic of Moldova continue to be one of the main factors of labour migration. Table 9 presents the characteristics of wages by sector, main types economic activities and gender.

Table 9. Characteristics of average gross monthly wages

	2014	2018	2019	2020	2021	2022
Average monthly wage (gross), MDL	4 089.7	6 268.0	7 233.7	7 943.0	8 979.8	10 447.3
Budget/real wage, %	87.3	88.7	89.8	90.7	83.6	81.2
Wage index, compared to previous year, %	111.3	112.2	115.4	109.8	113.1	116.3
Real wage index, %	105.9	108.9	110.1	105.8	107.6	90.4
Consumer price index (CPI), %	105.1	103.0	104.8	103,8	105.1	128.7
Gender Gap, p.p. (Gender inequality level, p.p.)	12.4	14.4	14.1	13.7	13.6	15.5
Average monthly wage by main types of economic activity, MDL						
Agriculture, forestry and fisheries, MDL	2 708.9	4 188.7	4 768.7	5 022.9	5 691.1	6 700.7
<i>Gender Gap, %</i>	9.5	11.8	10.9	11.1	10.8	8.5
Industry, MDL	4 388.1	6 485.7	7 151.0	7 564.2	8 242.0	9 541.2
<i>Gender Gap, %</i>	18.3	20.9	20.9	19.8	20.0	18.2
Construction, MDL	4 165.7	6 198.2	7 155.3	7 608.1	8 136.5	9 363.0
<i>Gender Gap, %</i>	9.5	15.9	15.6	12.0	11.2	13.0
Wholesale and retail trade, maintenance and repair of cars and motorcycles, MDL	3 367.5	5 414.9	6 543.9	6 881.9	7 609.9	8 960.6
<i>Gender Gap, %</i>	8.9	14.4	15.5	17.0	15.6	15.4
Transport and storage, MDL	3 939.5	5 985.6	6 836.2	6 533.1	7 201.2	8 794.9
<i>Gender Gap, %</i>	1.5	4.4	10.6	10.8	10.8	7.5
Financial and insurance activities, MDL	7 505.3	12 090.2	13 203.5	13 619.0	15 746.9	19 795.9
<i>Gender Gap, %</i>	27.6	38.0	42.9	44.6	41.4	32.5
Public administration and defense, obligatory social insurance, MDL	5 243.4	8 449.5	9 118.6	9 985.4	10 501.3	12 054.3
<i>Gender Gap, %</i>	10.8	6.8	2.1	8.0	7.5	12.4
Education, MDL	3 391.1	5 155.7	6 327.6	7 016.8	7 462.3	8 445.5
<i>Gender Gap, %</i>	7.7	-1.3	-1.1	-1.8	-3.5	-4.3
Health and social assistance, MDL	4 068.8	6 161.5	7 024.8	8 668.6	11 109.1	11 729.7
<i>Gender Gap, %</i>	10.9	18.6	19.6	23.3	17.9	22.4

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

From the analysis of data on the wages evolution, it can be note that there is the growth tendency both in the country as a whole and in the main types of economic activity. However, with a sharp growth in the Consumer Price Index (CPI) in 2022 (by 28,7% compared to the previous year), despite its nominal growth, real wages in this year decreased by 9.6% compared to 2021. In some sectors of economy, the average monthly wage is lower than the national average, including agriculture, forestry and fisheries (64.1% of the national average), education (80.8% of the national average), transport and storage (84.2% of the national average), wholesale and retail trade, maintenance and repair of cars and motorbikes (85.7% of the national average). The labour remuneration exceeds the level of average monthly wage in such service sectors as financial and insurance activities (1.9 times higher than the national average), public administration and defence, obligatory social insurance (15.4% higher than the national

average), health and social assistance (12.3% higher than the national average). Over the last two years, the gap between average monthly wages in the budget and real sectors has increased (by 16.4% and 18.8% respectively in 2021-2022). By type of economic activity, it can be noted that the largest gender gap between female's and male's wages are observed in financial and insurance activities (32.5%), health and social assistance (22.4%), industry (18.2%), wholesale and retail trade, maintenance and repair of motor vehicles and motorbikes (15.4%). In conditions of rising prices and tariffs for goods and housing and communal services, the low level of wages does not ensure the reproduction requirements of labour force, including it lost its stimulating factor to continue of labour activity, which forces the working age population to seek additional sources of income, including by going to work outside the country, joining the ranks of labour migrants. Given the fact that it is mainly the population in the most productive working age goes to work - males (see Table 5.), including those with professional skills, the labour force market is losing its stability and competitiveness, which confirms the relevance and importance of research and evaluation of the impact of demographic factors on the socio-economic development of the country, including the labour market for the scientific substantiation of public policies in the above-mentioned areas.

4. CONCLUSIONS AND RECOMMENDATIONS

Demographic processes (birth, death, life expectancy, population natural increase/population decline, migration) affect the age-sex structure of population and, as a consequence, on the quantity of labour resources, i.e. on labour market, including migration contributes to the reduction of unemployment rate and changes in supply/demand for labour force. Reproduction of population is the principal component of labour force market, the carrier of certain qualities necessary for economic activity and labour market development. Demographic processes also affect on social and labour relations, which in turn also affect the specifics of labour market functioning (ageing of labour force). The demographic structure of population, including the structure of economically active population has an impact not only the labour market, but is also a *determining factor* in the formation of the country's economic potential, the structure of national income, the burden on working age population, the structure of requirements for educational services, the characteristics of working places.

In the Republic of Moldova there are sustainable tendencies of population decline, population ageing and labour migration outside the country. According to data of official statistics, the number of the country's population with usual residence as of 01.01.2023 decreased by 2.0% in one year only (as of 01.01.2022), and compared to 2014, it decreased by 12.4% and 2019 - by 6.4%. In the age structure, the age group 15-64 years old (according to Eurostat methodology) constitutes the largest share or 65.9% and 59% according to the legislation of the Republic of Moldova. At the same time, one of the factors is the negative tendency of population decline as a result of migration processes: in 2021 the volume of net migration was -45.4 thousand persons compared to -43,0 thousand persons in 2022. As a result of demographic processes, the index of demographic dependence (the ratio of population in the age categories 0-15 years and 57/62 years and over per 100 persons of working age (16-56/61 years) as of 01.01.2023 increased to 69.4 persons compared to 60.6 persons as of 01.01.2014, and the index of demographic dependence of the population aged 65 years and over, respectively, as of 01.01.2023 was 24.4 persons compared to 15.3 persons as of 01.01.2014. Population ageing rate (population aging coefficient) as of 01.01.2023 increased to 23.8% (17.5% as of 01.01.2014), including 25.4% in rural (18.1% as of 01.01.2014), the female population (27.1%) is higher by 7.0 p.p. than the male population (20.1%), which is due to the excess mortality of males in working age (in 2022, as before, male excess mortality was 114 male deaths per 100 female deaths). Given processes lead to a change in the ratio between the

economically active and economically inactive population, to an imbalance in labour market. Thus, the share of inactive population in 2022 constituted 58.2% compared to 41.8% of economically active population, while the economic activity rate decreased from 43.3% in 2014, 45.9% in 2018 to 41.8% in 2022, with the highest economic activity rate for the age categories 45-54 years (63.7%), 35-44 years (61.3%), 25-34 years (53.5%), 55-64 years (45.2%), and it is the lowest (17.7%) for youth (15-24 years). Changes in socio-economic processes, development of market relations, structural reforms in the economy, a decrease in standard of living, the abolition of visa regime for citizens of the Republic of Moldova were the main factors of migration of working age population. However, in the period 2014-2021 the number of labour migrants tended to decrease, including in 2018 compared to 2014 by 1.6%, in 2021 - by 25.4%, and in 2022 compared to 2021 their number increased by 17.7%. There is a change in the structure of labour migrants by main age groups, including a decrease in migrants among youth in the 15-24 age group (in 2022 its share fell to 17.5% or by 10.2 p.p. compared to 27.7% in 2014), the share of the 25-34 age group decreased from 35.3% in 2014 to 32.0% in 2022, or by 3.3 p.p. At the same time, an increasing tendency in migrants at the most productive age group with professional skills was registered: the number of migrants in the age group 35-44 years increased by 8.6 p.p. and by 2.6 p.p. in 45-54 years, as well as by 2.0 p.p. in the elder age group 55-64 years.

Against the background of population decline and changes in its age and sex structure, a decrease in number of employed population was registered, including in 2018 by 8.7% compared to 2014, in 2022 by 1.2% compared to 2019. However, during the period 2020-2022, an increase in number of employed population was registered, including in 2022 by 3.3% compared to 2020 and by 2.2% compared to 2021. At the same time, it is necessary to be noted the tendency of labour force ageing: the share of youth aged 15-24 (in 2022 by 3.6 p.p. as compared to 2014 and by 1.5 p.p. as compared to 2019) and 25-34 (in 2022 by 2.1 p.p. as compared to 2014 and by 2.3 p.p. as compared to 2019) is decreasing. At the same time, the number of employed population in the age categories 55-64 years and 65 years and over is increasing (by 16.3% and 25.6%, respectively, in 2022 compared to 2014). The share of pensioners by age in labour market for the last three years is about 24%, with a predominant share of females (54%).

Changes in the structure of labour market as a result of demographic processes, including population ageing in conditions of a market economy, low labour income increase the risk of social exclusion, including poverty.

Depending on the age of the household head, the main sources of income are wages (up to 60% and more in the age group up to 59 years), while in elder age groups social benefits, including pensions, are predominant (for example, in the age group of 65 years and over it is 70.6% and the share of pensions is 63.3% in the structure of total income). For almost all age groups, remittances from labour migrants are an important source of income replenishment, which allow pay for utilities, children's education, medical service and others (share in the age group 30-39 years is 18.6%, 40-49 years - 15.1% and under 30 years - 14.3%). Low amount of wages as the main source of income of working age population, in turn, is the main motive for labour migration. For example, in conditions of a sharp increase in the Consumer Price Index in 2022 (by 28.7% compared to the previous year), despite its nominal growth, real wages for this year decreased by 9.6% compared to 2021. In some sectors of economy the average monthly wage is lower than the national average (in agriculture, forestry and fisheries it is 64.1% of the national average, in education - 80.8%, in transport and storage - 84.2%, in wholesale and retail trade, maintenance and repair of cars and motorbikes - 85.7%). During the past two years, the gap between average monthly wages in the budget and real sectors increased (by 16.4% and 18.8% in 2021-2022, respectively), and the gender difference between female's and male's wages remains, which is 15.5 p.p. in 2022.

Demographic processes and its impact on labour force market, including the reduction in the number and changes in the age and sex structure towards the ageing of labour market, are a challenge to improve the effectiveness of ongoing public policies. In order to ensure the stability and competitiveness of labour force market at the internal and external levels, to balance the supply and demand for labour force in the conditions of the transformational economy, it is necessary to carry out the following measures:

- reduction the deficit of highly qualified workers, training specialists in professions in accordance with the requirements of modern labour market and increasing the level of interaction between labour market and educational sphere, implementation of new approaches and programmes for training specialists in according to the requirements of labour market;

- to elaborate a new methodological approach to motivation of labour, increasing labour productivity and develop the productive power of the worker, interest in increasing production efficiency and saving working time, including ensuring the saving of traditional forms of labour, taking into account the use of scientific and technological progress and information technologies;

- elaboration and implementation of a labour migration mechanism, including analysis and forecasting of migration processes, elaboration of criteria and indicators to observe and assess the impact on labour market, demand for labour force, efficiency of migration management, attraction of foreign labour force and its use, as well as intellectual migration programmes with aim of studying foreign advanced practices, scientific developments and its implementation in the country;

- reforming the wage system in accordance with the implementation of effective methods and approaches to organizing the remuneration of labour applied in foreign practice, including taking into account the specifics of economic activity (grade system, tariff-free system, floating salary system, commission-based remuneration, SBP-systems (skill-based payment system), universal system of key performance indicators - KPI or Key Performance Indicators and others), which will make it possible to really assess the contribution of each worker, strengthen the role of the stimulating function of wages, and make it possible to more react quickly to changes in market conditions of socio-economic development and competition in labour market.

- elaboration of short- and medium-term forecasts of labour force market, taking into account changes in the structure of population by sex and age and place of residence to estimate and regulate national and local labour markets.

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