

EDUCATIONAL STRUCTURE OF LABOUR MARKET IN THE REPUBLIC OF MOLDOVA

Abstract: *The principal aim of this article is the analysis of qualitative changes of labour market in the Republic of Moldova. The study includes the analysis of education level of employed labour force and unemployed for the period 2000-2015, the change in labour force as the national level, and in the main age groups, by education level, including professional education and without. The conclusion about the improving the quality of labour force due to the increasing the education level that will contribute the competitiveness of labour force and minimize the negative effects of an ageing labour force in labour market.*

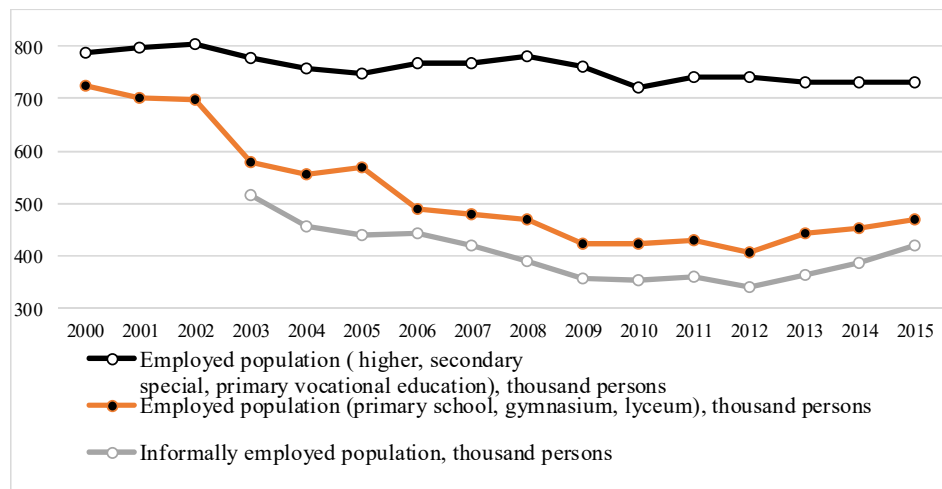
Key words: *labour market, labour force, education.*

JEL: *J21, J24.*

The education level of the structure of labour force has changed in conditions of ageing population and the reducing of working age population in the Republic of Moldova, which naturally has impact on its quality. The reduction of number of employed graduates of primary school, gymnasium and lyceum was the basic tendency in labour market until 2012 (Fig. 1, Annex, Table 1). The tendency of reduction of employed workers with low education level takes place in the global practice that is noted in the works of such scientists as Wisniewski A. [7], Kapelyushnikov R.I. [11, p. 17-18], and others. At the same time, the growth of the number of employees with primary school level of education, the gymnasium and lyceum was registered in 2013-2015, and as a result, led to an increase of the unemployed with a low education level as the labour market needs in labour force, which has a speciality and work experience.

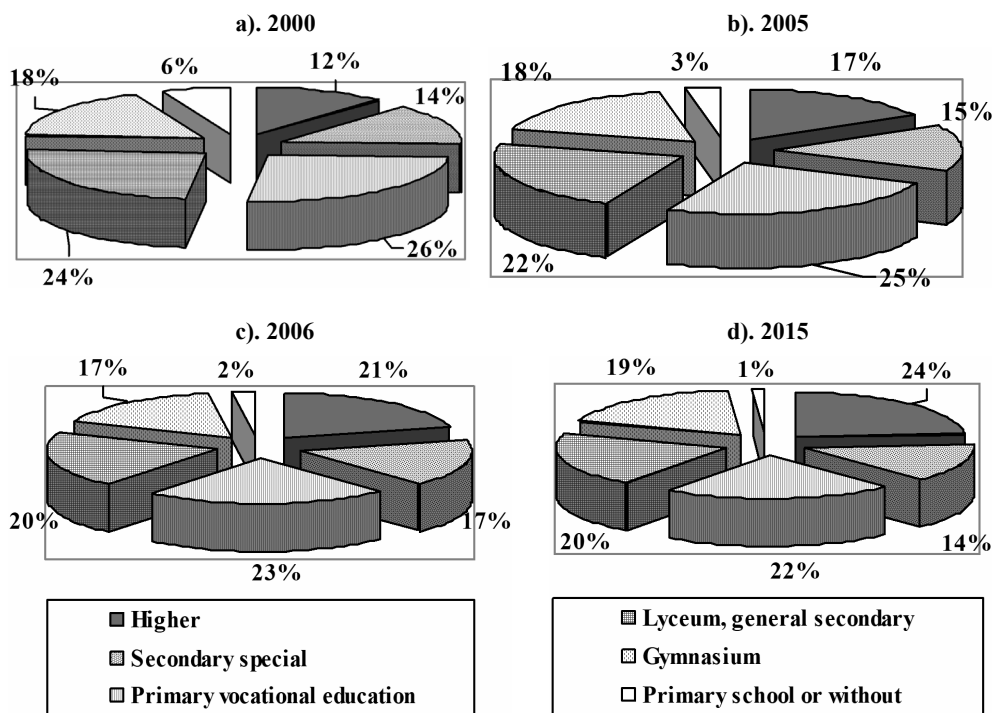
Analysis of the quality of labour force by level of education, including the unemployed realized on the basis of the Labour Force Survey data of the National Bureau of Statistics of the Republic of Moldova. Dynamics in the number of employed people by level of education is reflected in Fig. 1 [720.2; 805.5], including the tendency in informal employment [4, c. 202].

¹ Scientific researcher, National Institute for Economic Research, Academy of Science of Moldova, zaharov.svetlana@gmail.com.



Source: elaborated by the author based on NBS RM data, www.statistica.md.

Figure 1. Dynamics of total number of employees by education level and the number of informal employment, 2000-2015, thousand persons.



Source: Elaborated by the author based on its own calculations based on NBS RM data, www.statistica.md.

Figure 2. Characteristics of the employed population by education level, 2000, 2005, 2006, 2015, %.

Table 1

The ratio between the total number of employees with higher, secondary special, primary vocational education and educational level of primary school, gymnasium, lyceum, by age groups, 2000-2015, %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total	1.09	1.13	1.15	1.34	1.36	1.32	1.57	1.60	1.66	1.80	1.70	1.72	1.82	1.65	1.62	1.56
15-24	0.48	0.48	0.48	0.60	0.66	0.61	0.65	0.74	0.77	0.83	0.82	0.94	0.97	0.94	0.92	0.85
25-34	1.68	1.64	1.57	1.58	1.68	1.67	1.98	1.80	1.74	1.71	1.50	1.52	1.69	1.57	1.62	1.68
35-44	1.60	1.63	1.70	2.02	1.95	1.91	2.26	2.26	2.20	2.25	2.14	2.07	2.17	1.84	1.56	1.60
45-54	1.32	1.38	1.45	1.50	1.50	1.46	1.81	1.87	1.96	2.12	2.13	2.05	2.10	1.95	1.94	2.04
55-64	0.59	0.70	0.77	1.00	1.03	1.02	1.31	1.33	1.63	2.02	1.87	2.00	2.02	1.80	1.86	1.72
65 and over	0.12	0.13	0.16	0.25	0.27	0.30	0.42	0.45	0.52	0.83	0.92	1.08	1.08	0.87	1.03	0.89

Source: Elaborated by the author based on its own calculations based on NBS RM data, www.statistica.md.

The dynamics of the ratio of employed population with two levels of education mentioned above by main age groups is shown in Table 1. For example, an analysis of data shows that in 2015, as compared with 2000, the elder age groups 45-54 and 55-64 are largest ratio. Research shows that the difference between the age groups, which is characteristic for the Republic of Moldova, and takes place in the EU [10, p. 27].

Table 2

Employment rate by education level, by age groups, 2007, 2015, %

Education level	Total		15-24		25-34		35-44		45-54		55-64		65+	
	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015
Total	42.5	40.3	17.7	18.2	51.4	45.0	61.7	58.6	64.4	60.6	49.9	41.4	11.9	10.0
Higher	66.5	57.0	48.3	39.0	70.2	55.9	77.5	74.4	78.8	79.0	62.8	52.1	18.7	16.8
Secondary special	56.9	45.7	37.1	28.4	55.6	47.9	66.4	63.9	69.0	62.0	49.6	41.1	13.4	10.6
Primary vocational education	54.9	46.9	45.0	35.3	52.4	43.9	59.2	56.8	63.2	57.8	55.6	44.7	15.7	9.2
Lyceum; general secondary	37.3	36.8	12.4	13.0	41.2	38.1	55.3	53.2	58.8	55.0	49.6	38.8	13.6	11.8
Gymnasium	29.8	30.3	14.3	15.0	41.6	39.3	54.9	51.9	57.3	53.1	42.7	32.4	14.9	10.5
Primary school or without	8.1	5.1	4.6	3.9	24.2	13.8	20.9	23.0	25.7	12.4	21.6	11.0	11.9	3.5

Source: Elaborated by the author based on NBS RM data, www.statistica.md.

The share of employees with higher, secondary special and basic vocational education increased in 2015 as compared to 2000, from 52% to 60% or 8 percentage points (Fig. 2). For during the analyzed period, the share of persons with primary vocational education has declined by 4 pp, including as a result of reducing the number of people employed in industry and agriculture. The proportion of employees with primary vocational education in the age groups 25-34 and 35-44 years has decline (Annex, Table 1). The share of employees with lyceum education has decreased.

Table 3

Unemployment rate by education level, by age groups, 2007, 2015, %

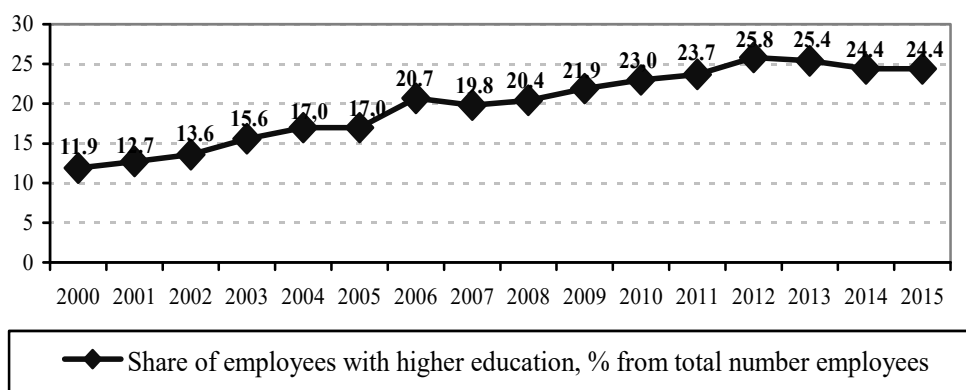
Education level	Total		15-24		25-34		35-44		45-54		55-64		65+	
	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015
Total	5.1	4.9	14.4	12.8	5.8	6.4	4.2	4.6	3.4	2.9	2.7	2.4	0.2	0.5
Higher	4.8	4.8	20.1	15.4	5.3	6.2	2.9	4.9	2.7	1.8	3.4	1.2	0.4	2.3
Secondary special	3.9	4.1	11.6	15.4	4.3	4.9	3.8	3.8	3.1	3.4	3.6	1.9	..	..
Primary vocational education	5.1	4.8	13.2	13.1	5.7	5.6	5.0	4.3	3.4	3.9	2.6	2.9	1.6	..
Lyceum; general secondary	5.6	4.1	12.8	9.8	6.5	5.4	4.8	4.6	4.2	2.4	3.3	2.5	..	..
Gymnasium	6.0	6.6	15.0	12.8	7.1	8.4	4.0	5.3	3.5	2.4	1.4	3.7	..	..
Primary school or without	2.9	4.3	11.1	3.1	11.7	15.7	..	..	2.2	..	..	..	..	..

Source: Elaborated by the author based on NBS RM data, www.statistica.md.

Considering the level of education of employed population, it may be noted that the existing education system for the last 20 years does not account for the real labour market demand for training specialists at all levels, from primary vocational education and specialists with higher education. Can be noted the trend of increasing the share of employees with gymnasium education compared to the lyceum, including those age groups 25-34 and 35-44 years (Annex, Table 1), as well as the reduction of employees with primary education up to 1% in 2015. Increasing the level of education of the employed population creates opportunities to satisfy the demand for qualified personnel of national economy.

The modern labour market is increasing in both the number of employed persons with higher education, as well as their share in the total employed population (Fig. 3) in almost all age groups of working age. However, the highest growth was registered in the age group 25-34 years, 22.3 pp (Annex, Table 1), and the share of age group 25-34 years increased to 37.1% in 2015 (Annex, Table 2). Therefore,

we can think that in the future the personnel with higher education in the elder ages will have composed a largest share in conditions of ageing workforce.



Source: elaborated by the author based on its own calculations based on NBS RM data, www.statistica.md.

Figure 3. Dynamics of the share of employees with higher education, 2000-2015, %

The level of education of labour force affects both the employment of labour force and unemployment. The employment rate analysis shows that the highest employment rate has the population with a higher education in all age groups (57.0% compared to 40.3% – total employment rate in 2015, Table 3). The availability of higher education is one of reduction risk opportunities of job loss for the working population, as well as increasing the chances of getting a job for the unemployed. The employment rate of working age population with lyceum, gymnasium or primary school education is lower than with higher, secondary special and primary vocational education. Moreover, the availability of professional education makes it possible the increase of the labour force competitiveness in the labour market.

The lower unemployment rate of working age population with higher, secondary special and primary vocational education has registered (Table 4). At the same time, it should be noted, that labour migration, especially in rural area, is a factor of unemployment decrease, otherwise, its level would be higher.

The **age group 15-24 years** is one of more small groups of working age population in labour market with lowest employment rate (Table 3). Firstly, this is connected with the low education level of young people, lack of profession. However, the share of employed population in this age group with a lyceum education remains high, despite a decline from 67.4% in 2000 to 53.9% in 2015 (Annex, Table 1). Second, this is connected with the extension of opportunities for young people get higher education and its accessibility, which is noted as one of the most important global tendency [1, 7, 11]. For example, scientific researcher Rosnick D. [3] points out that economic activity in age group 16-24 years has

fallen almost doubled in the period from 1980 to 2010 in labour market in the United States of America, and a reduction in economic activity rate in younger groups of working age population (till 20 years) was observed in Russia from 1992 to 2008 (Vasin S. et al. [6]). The financial resources can be directed at improving the quality of training of young people, taking into account the availability of new jobs in conditions of population ageing and reducing the inflow of young people into labour market, as well as it should be noted the interest of the families themselves to investing in education [10, 12]. In addition, in accordance with the current legislation in the Republic of Moldova [2, Article 2, Article 30], students and pupils of working age 15-24 years with no work experience, are busy mainly looking for temporary work and can not to receive the official status of the unemployed and apply for unemployment benefits.

You can not ignore the potential of the **age group 55-64 years** in labour market. From the analysis of changes in the education level in the age group of 55-64 years, it follows that the number of employed people in this age group has increased, mainly due to the groups with higher, secondary special and primary vocational education (Annex, Table 1). This age group with lower employment rate compared to the previous age group has a reserve to increase the employment rate in the long term.

The growth of the educational level of this age group is possible through lifelong learning (lifetime education), continuing education, training and retraining education programs, including and on-the-job training. In this age of the return on investments in human capital for developed countries reaches a maximum (Vasiliev V.N. et al. [5, p. 82]).

One of the problems associated with an increase in the education level of labour force, is the loss of employers' interest in education personnel (Galbraith D.A. [8, p. 289], Roik V.V. [13], ILO [10, p. 49]). The restructuring of social criteria and the mentality of entrepreneurs, as well as the reaction of the society is lagging. In its turn, the reduction in the number of young people in the labour market and the future of an ageing labour force will contribute to gradual change in the mentality of employer and society in relation to elder workers in labour market.

Increasing the education level of labour force or its quality is an important reserve of labour market development in conditions of population ageing and provision its competitiveness as a national labour market and improve the competitiveness of national economy.

The importance of raising the education level, and on this basis, the quality of the labour force for the country's economic development, the introduction of new innovative specialties, balancing the demand and supply of labour force one of the most important objectives of the Strategy "Moldova-2020", National Strategy for employment of labour force and Forecast labour market 2016².

² Labour Market Forecast 2016, National Employment Agency (NEA).

Conclusion

The following conclusions can be made based on labour market analysis by education level of employed population in the Republic of Moldova:

1. Important reserve of Moldovan labour market development in the context of demographic ageing is to increase the quality of the labour force by improving the education level, this makes it possible the labour force to be in demand in labour market. For this purpose, it is proposed to introduce training and retraining education programs, including for the age group 55-64 years for extension of possibilities of their economic participation in labour market.

2. Increase the proportion of employees with higher, secondary special and primary vocational education from 52% to 60% (by 8 pp) in 2015 compared to 2000. Increasing the share of employees with higher education were registered practically in all age groups of working age, including the highest growth was 22,3 pp in the age group 25-34 years, and the share of this age group to 37.1% in 2015 among the employees with higher education. Moreover, the proportion of employed population with primary vocational education tended to reduce, and with higher – to increase.

3. The education level has an impact on the quality of labour market, including the employment rate increases with increasing of educational level and its maximum value observed in labour force with higher education: 57.0% vs. 40.3% total in 2015, and the unemployment rate is also lower for employees with higher education.

Consequently, raising the education level enhances competitive opportunities of labour force in labour market, reduce the risk of unemployment, expands access to attractive jobs and is one of the factors increasing the productivity of labour and effective use of innovation. Increasing the quality of the labour force will contribute to adapt a labour force to new professions, promote an innovative economy, professional competence, employee readiness to constantly improve their skills a lifelong in the process of economic activity.

References

1. Balakrishnan R., Dao M., Solé J., Zook J. Recent U.S. labor force dynamics: Reversible or not? In: IMF Working Paper, April 2015. WP/15/76. 29 p. <https://www.imf.org/external/pubs/ft/wp/2015/wp1576.pdf>.
2. Legea Republicii Moldova privind ocuparea forței de muncă și protecția socială a persoanelor aflate în căutarea unui loc de muncă. Nr. 102 din 13 martie 2003. În: Monitorul Oficial al Republicii Moldova, 15.04.2003, nr. 70-72 (1163-1165).
3. Rosnick D. The Adult Recession. Age-Adjusted Unemployment at Post-War Highs. In: CEPR Issue Brief, July 2010. <http://www.cepr.net/index.php/publications/reports/the-adult-recession>.
4. Zaharov S. Informal employment in the framework of population ageing: the case of Moldova. In: Ovidiu, GHERASIM, Cuprian Ionel, ALECU, Teodor, PĂDURARU, coord. Progrese în teoria deciziilor economice în condiții de risc și incertitudine: conferința științifică internațională, 7 octombrie 2016. Ediția a XXXI-a, Academia Română – Filiala Iași, Institutul de Cercetări Economice și Sociale „Gh. Zane”. Iași: Editura Performantica, 2016, Vol. XXVII, p. 201-205.

5. Васильев В.Н., Гуртов В.А., Питухин Е.А., Рудаков М.Н., Серова Л.М., Сигова С.В., Суворов М.В. Рынок труда и рынок образовательных услуг в субъектах Российской Федерации. Москва: Техносфера, 2007, 680 с.
6. Васин С., Вишневский А., Денисенко М. Демографические изменения и экономика. Статья первая. В: ДЕМОСКОП Weekly, № 429-430, 1-20 августа 2010. <http://demoscope.ru/weekly/2010/0429/tema02.php>.
7. Вишневский А., Денисенко М., Мкртчян Н., Тюрюканова Е. Демографические изменения и экономика. Статья вторая. В: ДЕМОСКОП Weekly, 2010, nr. 431. <http://demoscope.ru/weekly/2010/0431/tema01.php>.
8. Гэлбрейт Д.К. Новое индустриальное общество. М: Прогресс, 1969, 350 с.
9. Дмитриев М.Э., Малеева Т.М., Синявская О.В. Демографические вызовы и экономический рост. В: Россия перед лицом демографических вызовов. Доклад о развитии человеческого потенциала в Российской Федерации 2008. М.: UNDP, 2009. с. 121-151. <http://demoscope.ru/weekly/2010/0429/analit02.php>.
10. Занятость и социальная защита в новом демографическом контексте. Доклад IV. МБТ, Международная конференция труда, 102 сессия. Женева, 2013. 134 с.
11. Капелюшников Р.И. Записка об отечественном человеческом капитале. Препринт ГУ-ВШЭ, Серия WP3, 2008, nr. 01, 00 с.
12. Капелюшников Р.И. Экономический подход Гэрри Беккера к человеческому поведению. В: США, экономика, политика, идеология, 1993, № 11. <http://www.libertarium.ru/68397>.
13. Роик В. В: Человек и труд, 2005, nr. 10.
14. Шуняев А.В. Тенденции изменения качества рабочей силы как основы её конкурентоспособности в современной экономике. В: Наукоедение, 2015, том 7, nr. 3. <http://naukovedenie.ru/PDF/67EVN315.pdf>.

ANNEXES

Table 1

Structure of employed population by education level, by age groups, 2000, 2015, %

	15-24		25-34		35-44		45-54		55-64		65+	
	2000	2015	2000	2015	2000	2015	2000	2015	2000	2015	2000	2015
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Higher	3.7	15.5	14.0	36.3	13.6	22.2	14.5	20.8	11.4	19.3	4.5	22.6
Secondary special	8.3	10.5	16.7	8.1	17.9	14.0	16.1	19.2	8.8	18.1	1.6	14.4
Primary vocational education	20.6	20.0	32.0	16.2	30.1	23.7	26.3	27.1	16.8	25.8	4.9	10.2
Lyceum; general secondary	30.1	19.1	26.7	15.9	27.3	19.7	22.5	22.8	12.2	23.4	3.7	13.6
Gymnasium	35.2	33.0	10.4	23.0	10.6	20.1	19.0	10.0	32.4	13.2	21.0	32.4
Primary school or without	2.1	1.9	0.2	0.5	0.5	0.3	1.6	0.1	18.4	0.2	64.3	6.8

Source: Elaborated by the author based on its own calculations based on NBS RM data, www.statistica.md.

Table 2

Distribution of employed population by education level, by age group, 2000 2015, %

	Higher	Secondary special	Primary vocational education	Lyceum; general secondary	Gymnasium	Primary school or without
2000						
Total	100.0	100.0	100.0	100.0	100.0	100.0
15-24	4.0	7.5	10.4	16.4	25.0	4.8
25-34	23.2	23.2	24.6	22.2	11.3	0.8
35-44	33.3	36.4	34.0	33.5	16.9	2.5
45-54	28.6	26.6	24.0	22.3	24.4	6.5
55-64	9.0	5.8	6.1	4.8	16.7	29.9
65 and over	1.9	0.5	0.9	0.8	5.7	55.5
2015						
Total	100.0	100.0	100.0	100.0	100.0	100.0
15-24	4.9	5.7	7.0	7.5	13.7	25.3
25-34	37.1	14.3	18.2	19.9	30.7	19.7
35-44	22.1	24.2	25.9	24.2	26.2	12.6
45-54	20.5	32.6	29.4	27.7	12.9	2.8
55-64	12.6	20.1	18.2	18.6	11.2	4.2
65 and over	2.8	3.1	1.3	2.1	5.3	35.4

Source: Elaborated by the author based on its own calculations based on NBS RM data, www.statistica.md.