

МЕЃУНАРОДЕН ЦЕНТАР ЗА СЛАВЈАНСКА ПРОСВЕТА - СВЕТИ НИКОЛЕ

«МЕЃУНАРОДЕН ДИЈАЛОГ: ИСТОК - ЗАПАД»
(ЕКОНОМИЈА, БЕЗБЕДНОСНО ИНЖЕНЕРСТВО,
ИНФОРМАТИКА)

СПИСАНИЕ
на научни трудови

**ДВАНАЕСЕТТА МЕЃУНАРОДНА
НАУЧНА КОНФЕРЕНЦИЈА
„МЕЃУНАРОДЕН ДИЈАЛОГ: ИСТОК - ЗАПАД“
МЕЃУНАРОДЕН СЛАВЈАНСКИ УНИВЕРЗИТЕТ
„ГАВРИЛО РОМАНОВИЧ ДЕРЖАВИН“
СВЕТИ НИКОЛЕ - БИТОЛА**

Година VIII

Број 1

Април 2021

- СВЕТИ НИКОЛЕ, Р. СЕВЕРНА МАКЕДОНИЈА -
- 2021 -

Издавач: Меѓународен центар за славјанска просвета - Свети Николе

За издавачот: м-р Михаела Ѓорчева, директор

Наслов: «МЕЃУНАРОДЕН ДИЈАЛОГ: ИСТОК - ЗАПАД» (ЕКОНОМИЈА, БЕЗБЕДНОСНО ИНЖЕНЕРСТВО, ИНФОРМАТИКА)

Организационен одбор:

Претседател: проф. д-р Јордан Ѓорчев

Заменик претседател: д-р Стромов Владимир Јуревич, Русија

Член: м-р Борче Серафимовски

Член: м-р Милена Спасовска

Уредувачки одбор:

Проф. д-р Ленче Петреска - Република Северна Македонија

Проф. д-р Александар Илиевски - Република Северна Македонија

Проф. д-р Мирослав Крстиќ - Република Србија

Проф. д-р Момчило Симоновиќ - Република Србија

Проф. д-р Тодор Галунов - Република Бугарија

Проф. д-р Даниела Тасевска - Република Бугарија

Доц. д-р Хаџиб Салкиќ - Република Босна и Херцеговина

Проф. д-р Татјана Осадчаја - Руска Федерација

Доц. д-р Вера Шунаева - Руска Федерација

Уредник: проф. д-р Јордан Ѓорчев

Компјутерска обработка и дизајн: Адриано Панајотов, Маја Маријана Панајотова, Благој Митев

ISSN (принт) 1857-9299

ISSN (онлајн) 1857-9302

Адреса на комисијата: ул. Маршал Тито 77, Свети Николе, Р. Северна Македонија

Контакт телефон: +389 (0)32 440 330

Уредувачкиот одбор им се заблагодарува на сите учесници за соработката!

Напомена:

Уредувачкиот одбор на списанието «МЕЃУНАРОДЕН ДИЈАЛОГ: ИСТОК-ЗАПАД» не одговара за можните повреди на авторските права на научните трудови објавени во списанието. Целосната одговорност за оригиналноста, автентичноста и лекторирањето на научните трудови објавени во списанието е на самите автори на трудовите.

Секој научен труд пред објавувањето во списанието «МЕЃУНАРОДЕН ДИЈАЛОГ: ИСТОК-ЗАПАД» е рецензиран од двајца анонимни рецензенти од соодветната научна област.

Печати: Печатница и книжарница „Славјански“, Свети Николе

Тираж: 100

МЕЃУНАРОДЕН ДИЈАЛОГ

ИСТОК - ЗАПАД

ЕКОНОМИЈА, БЕЗБЕДНОСНО ИНЖЕНЕРСТВО,
ИНФОРМАТИКА

ОБЛАСТ
ЕКОНОМИЈА

331.52(497.7)“2004/2016”

331.56(497.7)“2004/2016”

Проф. д-р Самоил Малчевски

Факултет за економија и организација на претприемништво

МСУ „Г. Р. Державин“ Свети Николе – Битола

Р. Северна Македонија

CHANGES IN THE STRUCTURE OF EMPLOYEES IN THE REPUBLIC OF MACEDONIA IN THE PERIOD 2004 - 2016, CONDITION AND IMPLICATIONS

ABSTRACT: Unemployment is one of the biggest problems facing the Republic of Macedonia since its independence. Thus, within a certain period of time the unemployment reached an incredible 39%, but according to data from the State Statistical Office (SSO) published in February 2017, the unemployment has fallen to 22,6%. However, according to the data from the SSO, which in the calculations of the employment and unemployment rates uses a Labor Force Survey, a number of illogicalities can be noticed. Also, again according to the SSO data, it can be noted that in the period under review not only the total number of employees significantly increases, but also the structure of the total number of employees is significantly changed. Hence the need for a thorough and impartial analysis of unemployment and changes in the structure of employees in the reference period, in order to consider the possible implications for future economic development. These issues are the subject of elaboration in this paper.

KEYWORDS: Key words. Unemployment, Employees, Labor market

JEL CODES. J01, J08, J44, J60

1. INTRODUCTION

The labor market and its changes are indicators that should be used to plan a number of segments in society, such as education, health, social protection, etc. Hence the need for a comprehensive and unbiased monitoring of it. In addition, it is important not only to calculate the employment and unemployment rates, but to continuously have full knowledge of the changes in the number of employment by sectors and departments of activity, as well as the structure of the workforce according to outcomes of secondary vocational education (school preparation). In this direction, the SSO uses the Labor Force Survey as the source of information on the basic categories of the workforce - employed, unemployed and inactive population, as well as for the structure of these categories and their developmental tendencies, which is implemented in accordance with the methodological recommendations of the International Labor Organization (ILO) and the recommendations of the European Statistical Bureau (Eurostat), taking into account the specificities of the Republic of Macedonia in this area.

Since 2004, the Labor Force Survey has been carried out quarterly by a sample of 5,000 households throughout the country. In our considerations, we will not detail the methodology used in the implementation of the Labor Force Survey, but we will note that the outcome results from the same are:

- » working age population by economic activity (total and by age)
- » workforce (employed and unemployed) according to school preparation,
- » activity rates of the population aged 15 years and over,
- » employees by occupation,
- » employees by status of employment, and unemployed according to the length of unemployment.

2. ANALYSIS OF SOME INDICATORS OBTAINED WITH THE LABOR FORCE SURVEY

In calculating the employment and unemployment rates, the SSO from the Labor Force Survey uses the data for the working age population according to the economic activity. As we have stated, we will not analyze in more detail the methodology used by the SSO in the implementation of the Labor Force Survey, but we will try to analyze some of the data obtained from the Labor Force Survey.

Table 1. Labor Force Survey - unemployed and employed by employment status in the period 2004 - 2016

Year	Unemployed	Total employed	Employee	Employer	Self- employed	Unpaid family worker
2004	309286	522995	394345	30798	53252	44600
2005	323934	545253	391651	31276	65487	56840
2006	321274	570404	403564	33853	70789	62199
2007	316905	590234	426662	32655	71245	59672
2008	310409	609015	437475	30084	78824	62632
2009	298873	629901	453031	32469	80053	64349
2010	300439	637855	456037	34395	83312	64111
2011	294963	645085	463075	36754	83551	61705
2012	292502	650554	475909	31147	88162	55336
2013	277217	678838	488110	31656	98182	60889
2014	268809	690188	506126	26914	96401	60747
2015	248933	705991	521536	30408	98016	56032
2016	225049	723550	548973	32003	95364	47211

Source. Statistical Yearbook of the Republic of Macedonia

Table 1 shows the number of unemployed, the total number of employees and the structure of employees according to the status of employment in the period 2004-2016. These data, as well as that the unemployment rate, equals the percentage share of the number of unemployed in the total workforce, in the past period, the SSO calculated that the unemployment rate decreased from 37.16% in 2004 to 34.93% in 2007, so in 2010 it was 32.02%, in 2013 it was 28.99%, in 2016 23.72% and finally according to the announcement of the SSO in February 2017, the number of employees in the state was 739892, the number of unemployed was 215807 and the unemployment rate was 22.6%. At first glance there is nothing controversial in these data, but taking into account the situation in the country remains unclear how from December 2016 to February 2017 the number of employees has increased by a whopping 16342 people. In addition, it can be noticed from the data in Table 1 that in the analyzed period we have illogical changes in the number of employers. Thus, for example, this number of 32655 in 2007 has decreased to 30084 in 2008, then steadily increased and in 2011 it reached a figure of 36754 people, to 26914 in 2013, an incredible decrease of 9840 employers, while at the same time the number of employees increased by 45103 people. We will not comment in particular whether this is possible or not, but we will seek the answer in the data from Table 2, which, according to the Labor Force Survey, the data presented on the employees are accordant to educational status.

From the presented data on the number of employees without education and incompleting primary education, it can be concluded that in the first category we have atypical changes in the numbers from year to year and they are varying to up to 3000, in the second category this number grows until 2006, and then with insignificant oscillations it is constantly decreasing. However, this is not the occasion with employees with primary education. According to the data in Table 2 in 2005, compared to 2004, this number increased by 14979, so the following year it decreased by 8679 employees, in 2007 compared to 2008 year increased by a significant 14155 people. In this category, there are such oscillations in the number of employees in other years, and the same happens with the number of employees with three-year secondary education. On the other hand, according to the Labor Force Survey, the number of employees with four-year secondary education is on a steady increase, with a slight decrease in 2011 compared to 2010, while the number of employees with higher education is constantly decreasing, and we can notify that the increase is only in 2013 compared to 2012.

Table 2. Labor Force Survey - employees according to education in the period 2004 - 2016

Year	Total	Without education	Incomplete primary education	Primary education	3 years of secondary education	4 years of secondary education	Higher vocational education	University level education
2004	522995	4626	23405	109440	58252	220015	29034	78224
2005	545253	3570	31932	115645	58636	227908	30593	76970
2006	570404	3331	32067	130624	64410	232521	26559	80893
2007	590234	6287	25054	121945	71478	248412	25862	91197
2008	609015	4014	26243	136100	74991	256349	24630	86688
2009	629901	2701	26186	135371	71168	267401	23662	103411
2010	637855	3764	24490	130115	74959	267477	24656	112395
2011	645085	3082	22812	130551	73853	264780	20751	129256
2012	650554	3044	21088	120579	72661	276297	19903	136982
2013	678838	3579	20873	130166	78352	296484	21411	127974
2014	690188	2800	17470	140296	63043	313005	19471	134103
2015	705991	1969	17669	136320	51209	327947	18770	152108
2016	723550	3266	14076	121990	65097	329168	16853	173099

Source. Statistical Yearbook of the Republic of Macedonia

Table 3. Labor Force Survey - employed and unemployed with higher education in the period 2004-2016

Year	Employed	Unemployed	Total
2004	78224	17920	96144
2005	76970	19892	96862
2006	80893	21910	102803

2007	91197	23550	114747
2008	86688	24077	110765
2009	103411	29376	132787
2010	112395	32973	145368
2011	129256	39473	168729
2012	136982	41614	178596
2013	127974	41666	169640
2014	134103	40389	174492
2015	152108	41424	193532
2016	173099	43092	216191

Source. Statistical Yearbook of the Republic of Macedonia

As can be seen from the data in Table 2, according to the Labor Force Survey, the number of employees with university level education is on a steady increase, and in the period 2004-2016 it has increased by 94875, an increase of unbelievable 121.29%. This increase directly affects the educational structure of the employees, so the participation of employees with higher education of 14.35% in 2004 increased to an incredible 23.92% in 2016. Clearly, if this is indeed true, it can be taken as an argument of some claims that the Republic of Macedonia is taking a big step toward the economically developed countries. However, taking into account that according to the undisputed data of the SSO in the part of higher education, in the period 2005-2016 there was a total of 102577 employees in the Republic of Macedonia with a diploma of higher education (Table 8), therefore the change in the total number of unemployed and employees with University education in 2016 in relation to 2004 can not be 120047 employees, as it is stated in Labor Force Survey. Also, from the data in Table 3, it can be seen that according to the Labor Force Survey, the total number of unemployed and unemployed persons with higher education in 2015 compared to 2014 increased by 19040, and the increase in 2016 compared to 2015 is for 22659 persons. The last is absurd data, since the corresponding increases in the number of persons who have obtained a higher education diploma are 8315 and 8100. This means that even if we neglected the mortality and mass emigration of this category of citizens (immigrants are not recorded) in 2016, compared to 2014, we have an increase of 41669 people, and that number could have been increased by up to 16415 people. Such a difference of 25284 persons, that is, 154,29% more than the maximum possible increase, is sufficient argument that Labor Force Survey conducted in the past ten years should not be considered relevant when calculating the employment and unemployment rates.

3. EMPLOYEES BY SECTORS AND DEPARTMENTS OF ACTIVITY IN THE PERIOD 2004 - 2016

In the previous considerations, we have seen why the Labor Force Survey can not be taken as a metric indicator of the number of employees and the unemployed, as well as for calculating the employment and unemployment rates. Hence, taking into account that data on employees by sectors and departments of activity involves all employees who have a working relationship with a business entity, regardless of whether they are engaged permanently or part time, whether they work full or shorter than full time, as well as the fact that when calculating the average net salary, the SSO

is using the data for the employees by sectors and departments of activity . In the further considerations, in order to see the changes in the number of employees, as well as the changes in the structure of the total number of employees we will use exactly these data. We will confine ourselves to the period from 2004 to 2016, because:

- » in 2004, for the first time are included employees of the Ministry of Defense and the Ministry of the Interior in the number of employees, so the data from the previous period are incompatible with the data starting from 2004 onwards, and
- » from 2011, the SSO applies a new National Classification of Activities (NKD Rev.2) for collecting and processing data for employees and salaries, but for our consideration the data given in Tables 4 and 5 are comparable, as it can be seen in 2010 year that is processed according to the old and the new classification, the differences in the sectors that are of interest are insignificant.

According to the data given in Tables 4 and 5, the total number of employees in the period under review increased from 411723 in 2004 to 534200 in 2016, an increase of 29.75%. Furthermore, it can be noticed that at the same time the total number of employees in the sectors Agriculture, Forestry and Fisheries, Mining and Quarrying, Construction and Manufacturing Industry decreased from 161888 in 2004 to 157165 employees in 2016, which means that the share of these sectors in the total number of employees decreased from 39.32% in 2004 to 29.42% in 2016. Furthermore, the total number of employees in the wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods increased from 66624 people in 2004 to an incredible 98527 in 2016, which means that its participation in the total number of employees grew from 16.18% in 2004 to 18.84% in 2016.

On the other side, the total number of employees in the sectors activities related to real estate, professional, scientific and technical activities, administrative and support services, education, health and social work and public administration and defense, compulsory social security increased from 11571 employees in 2004 to an incredible 16471 employees in 2016, which means that the percentage share of these sectors in the total number of employees increased from 27,60% in 2004 to 30,79% in 2016. What this means is not to comment in particular, but we can notice that according to the data of the SSO in this period, the number of employed in the scientific research and development department has fallen from 768 in 2004 to 648 in 2016.

Table 4. Employees by sectors and departments of activity in the period 2004-2010

Year	Total	A	B	C	D	E	G	G
2004	411723	15404	170	1880	113639	14175	30795	66624
2005	411031	12115	112	2099	110129	13493	28731	71860
2006	418192	11864	147	2731	108994	13626	27546	72576
2007	434041	12568	135	2751	113088	13516	26307	76750
2008	434858	12568	120	3373	107706	13939	25333	75855
2009	426252	13716	132	3420	104751	12965	24574	73234
2010	435524	12989	110	3702	102474	13342	22850	78230

Year	H	I	J	K	L	M	N	O
2004	11905	26449	6765	13075	36244	30391	30861	13346
2005	12892	26449	6458	14553	37206	30690	30373	12608
2006	13040	27255	6479	17960	38526	31559	33235	12654
2007	13040	29683	7110	21677	39053	32134	31809	14420
2008	13371	27446	8413	24176	41377	33548	32788	14667
2009	13371	26881	8229	21950	42328	34085	32058	14261
2010	13371	26580	8405	26628	42478	35169	32122	17074

Source. Statistical Yearbook of the Republic of Macedonia

Legend. **A** – agriculture, hunting and forestry, **B** – fisheries, **C** – mining and quarrying, **D** – manufacturing industry, **E** – electricity, gas and water supply, **F** – construction, **G** – wholesale and retail trade, repair of motor vehicles and personal and household goods, **H** – hotels and restaurants, **I** – traffic, storage and communications, **J** – financial intermediation, **K** – real estate activities, informing and business activities, **L** – public administration and defense, compulsory social security, **M** – education, **N** – health and social work, **O** – other communal, cultural, general and personal service activities and activities

Table 5. Employees by sectors and departments of activity in the period 2010-2016

Year	Total	A	B	C	D	E	F	G	H	I
2010	435078	12176	3697	101093	7716	8392	23340	77010	22696	13988
2011	458873	12394	3989	100878	7711	8555	26106	83679	26453	16267
2012	474398	12348	4382	101132	7833	9024	27575	87064	28441	18359
2013	483447	11665	4146	104214	8389	9575	26266	88213	28536	18225
2014	501788	11665	4164	111559	8072	9859	28640	90877	29529	20076
2015	519031	11665	4393	111208	7974	10055	29264	93868	31188	21468
2016	534200	11665	3548	111402	8286	9787	30550	98527	32841	23050

Year	J	K	L	M	N	O	P	Q	R	S
2010	8523	8404	1566	12036	12552	42474	35193	31200	7648	5374
2011	9823	8513	1714	13783	13319	43258	36099	32505	7375	6452
2012	9972	8843	2000	15692	14610	44006	36002	32775	7986	6354
2013	10087	9266	2135	16074	16269	44102	36637	33360	8806	6594
2014	10744	9391	2135	16661	18996	44262	36996	34214	9543	6701
2015	12388	9150	2334	18687	18996	46774	37319	36253	10362	7154
2016	13401	9421	2442	19200	18996	47364	38210	38259	11110	6141

Source. Statistical Yearbook of the Republic of Macedonia

Legend. **A** – agriculture, forestry and fisheries, **B** – mining and quarrying, **C** – manufacturing industry, **D** – electricity, gas, steam and air conditioning supply, **E** – water supply, sewerage, waste management and remediation activities, **F** – construction, **G** – wholesale and retail trade, repair of motor vehicles and motorcycle, **H** – transportation and storage, **I** – accommodation and food service activities, **J** – information and communication, **K** – financial and insurance activities, **L** – real estate activities, **M** – professional, scientific and technical activities, **N** – administrative and support service activities, **O** – public administration and defence, compulsory social security, **P** – education, **Q** – human health and social work activities, **R** – arts, entertainment and recreation, **S** – other service activities

As for the Education sector, the number of employees increased from 30391 in 2004 to 38210 in 2016, which means that its participation in the total number of employees decreased from 7,38% in 2004 to 7,15% in 2016 year, so it is clear that in this case we have no negative tendencies, as the previous considerations indicate. This conclusion is also indicated by the fact that in the past period, a large number of high schools and faculties have been opened, therefore this sector will be observed in more details. Similarly with the Sector for Health and Social Care, the share of the number of employees in the total number of employees decreased from 7.5% in 2004 to 7.15% in 2016, so we can conclude that in this sector we do not have negative trends, which justifies the present public opinion that the number of healthcare workers has significantly decreased in the area of health care, at the expense of the increased number of administrative and technical personnel. That is why in the following considerations we will deal more closely with this sector of activities.

At the end of this section we can note that on the negative tendencies in the structure of the employees by sectors and departments of activity also indicate the total number of employees in the departments of protective and investigative activities and activities of gambling and betting which has increased from 5447 employees in 2010 of 9109 employees in 2016, which is certainly the result of the economic policies that were conducted in this period, but also of the overall social life.

4. SOME INDICATORS FOR THE EDUCATION SECTOR

Earlier we saw that the share of the number of employees in the education sector in the total number of employees decreased from 7.5% in 2004 to 7.15% in 2016. Considering that during this period a nine-year elementary education was introduced and several high schools and higher education institutions were opened, it is logical to assume that in the past period the education sector has adapted to the needs of the society. However, only this data can not confirm or deny the stated assumption, which is continuously placed by institutions, so we will look in more detail on some indicators related to this sector.

From the data given in Table 6 it can be seen that in the considered period, except for the school year 2005/06 when the nine-year education was introduced, the number of schools decreased from 1005 in 2005/06 to 990 in 2015/16 with a continuous decrease of the number of students, from 235185 in 2005/06 to 185119 in 2015/16, a decrease of 21.23%. However, during this period, except for the introduction of three elective courses and the change of mathematics and natural sciences programs, there were no significant changes. This means that we have a slight change in the number of classes, ie. however, the number of primary school teachers increased from 14917 in 2005/06 to 17791 in 2015/16, an increase of 19.27%.

Table 6. Schools, higher schools, faculties, students, teachers in the period 2004-2016														
	Primary education	Secondary Education	Higher vocational education	High education	Students	Teachers	Schools	Students	Teachers	Faculties	Students	Teachers		
	Schools	Students	Teachers	Schools	Students	Teachers	Schools	Students	Teachers	Faculties	Students	Teachers		
2003/04	1012	229654	13791	96	93791	5863	1	960	30	29	45677	1538		
2004/05	1010	223876	13970	100	94054	5946	1	1112	29	38	48252	1645		
2005/06	1005	235185	14917	100	93908	6136	1	1276	29	36	47092	1639		
2006/07	1000	228207	15106	104	93763	6280	3	1338	31	43	55673	1640		
2007/08	997	220833	15691	107	92753	6438	3	1814	69	78	62440	1959		
2008/09	991	215078	16205	110	93164	6832	5	1866	78	101	61571	2104		
2009/10	990	208980	16403	110	94284	7008	6	2102	96	101	55792	1961		
2010/11	990	201914	16946	114	92848	7197	5	2102	90	112	61148	2186		
2011/12	986	197859	17233	113	91167	7298	4	1874	96	115	56873	2144		
2012/13	990	194055	17424	113	88582	7442	4	1064	96	118	55842	2111		
2013/14	990	190541	17624	115	84827	7421	3	1049	88	120	56697	2213		
2014/15	989	188361	17664	118	81788	7345	2	960	65	122	58399	2388		
2015/16	990	185119	17791	121	77625	7289	3	969	85	126	58896	2716		
Source: Statistical Yearbook of the Republic of Macedonia														

As for the number of students in secondary education, it was relatively constant in the period 2003/04 to 2009/10, but then decreased from 94248 to 77625 in 2015/16. However, during this period the number of schools increased from 96 in 2003/04 to a staggering 121 schools in 2015/16, and the number of teachers increased from 5863 in 2003/04 to 7289 in 2015/16. The latter is at least illogical, as given the same curricula and a decrease in the number of students by 20.83% in 2015/16 compared to 2003/04 we have an increase in the number of schools by 26% and an increase in the number of teachers for 24.32%.

Further, according to SSO data, the number of students increased from 46637 in 2003/04 to 59865 in 2015/16, who in 2003/04 studied at 30 faculties, and in 2015 they studied at 3 colleges and 126 faculties. This means that 95 new faculties have been opened in the past period, the opening of which is more a result of political decisions than the real needs and opportunities for society. In support of this statement, there are also data that the number of teachers in higher education institutions - 1568 in 2003/04 - who have been teaching at 30 higher education institutions, has increased to 2801 teachers, who have been teaching at 129 higher education institutions. Here, the competent state authorities should explain how is it possible for the newly opened 99 higher education institutions, the teaching process to be delivered with an increase of only 1231 teachers and what this means for the quality of the staff that these faculties and colleges produce. The latter is of particular importance because according to available data almost all newly opened colleges and faculties are accredited for first and second cycle studies.

It is clear from previous considerations that the increase from 7819 persons in the number of employees in the education sector is not due to the massive opening of higher education institutions, but that this increase is largely due to employment in primary and secondary education subsystem. There is a paradoxical situation in which the number of students in primary and secondary education in 2015/16 compared to 2003/04 decreased by 60611 students, i.e. by 18.74%, and in the same period the number of teachers increased by 5426 persons, i.e. by 21.64%.

How did this happen?

Simply by abusing the existing positive legal regulations. According to the Law on Primary Education, classes in primary education can have 20-30 students, and the formation of classes with less than 20 students must be approved by the minister of education and science. There is an analogous solution in the Law on Secondary Education, but there should be 25-35 students in the class. However, from the data in Table 7 it can be seen that the average number of pupils in primary education classes is constantly decreasing and that from 23.2 students in 2003/04 dropped to 17.43 students in 2015/16. The situation is similar in secondary education, where the average number of students dropped from 30.43 to 22.52 in the same period. This could be explained merely by stating that, according to the positive legislation in 2015/16, the number of classes should be in range from 5445 to 7713, which means that by using the discretion to approve classes with a smaller number of students than legally required, the Minister approved funding for 2908 classes more than the maximum number provided by the law, an increase of a whopping 27.38%. Furthermore, this percentage in secondary education is 11.10%, while increases in the number of classes from the minimum number of allowed classes in primary and secondary education are 95.07% and 55.42%, respectively.

Table 7. Number of classes and average number of students per class in primary and secondary education in the period 2004-2016

	Classes		Students in classes		Classes by law			
	Primary	Secondary	Primary	Secondary	Primary-max	Primary-min	Secondary-max	Secondary-min
2003/04	9964	3082	23,2	30,43	9565	6752	3752	2680
2004/05	9920	3134	22,57	29,93	9329	6585	3762	2678
2005/06	10823	3184	21,73	29,46	9800	6918	3756	2683
2006/07	10775	3219	21,18	29,14	9509	6712	3751	2679
2007/08	10713	3237	20,61	28,65	9201	6495	3711	2651
2008/09	10713	3295	20,08	28,27	8962	6326	3722	2662
2009/10	10622	3398	19,67	27,74	8708	6147	3772	2694
2010/11	10567	3441	19,11	26,98	8413	5939	3714	2653
2011/12	10685	3465	18,52	26,31	8244	5820	3647	2601
2012/13	10657	3467	18,21	25,55	8086	5708	3544	2531
2013/14	10664	3457	17,87	24,54	7939	5605	3394	2424
2014/15	10689	3494	17,62	23,41	7848	5541	3272	2337
2015/16	10621	3447	17,43	22,52	7713	5445	3105	2218

Source. Statistical Yearbook of the Republic of Macedonia and own calculations

Another parameter that has a long term affect on the labor market are the outputs of the educational system, both the quality and the structure of the graduates. In the first two columns of Table 8 are given the numbers of graduated students in primary and secondary education for the considered period, which should be the basis for planning of secondary and higher education, or the network of the educational system. But it seems that in the past no one has taken into account these indicators, so in this sector the daily politics, rather than the educational policy, has been primary. .

We will not comment separately on the outputs of higher education, as it is subject to separate analysis, but we will note that such a higher education output is not in the function of the development of the state, and can even be said to slow it down. Namely, from the data in Table 8 it can be seen that in the considered period, 69.69% of the graduates were from the social sciences, while in certain years this percentage was higher than 73%. Here we should also note that the number of medical science graduates in the considered period is 6.70%, and the social sciences and medical sciences account for a whopping 76.39% the total number of graduates.

Table 8. Students who have completed their education in the period 2004-2016

	Higher education										
	A	B	C	D	E	F	G	H	I	J	K
2003/04	29039	23621	285	4725	304	651	385	213	3135	67	110
2004/05	28816	24225	265	5132	370	659	353	301	3449	92	189
2005/06	28993	25588	336	5847	356	804	417	347	3923	85	203
2006/07	27747	25629	406	7954	415	972	460	374	5733	82	277
2007/08	27046	24700	811	10027	594	1209	564	297	7363	87	272
2008/09	26915	24210	662	9570	525	1556	558	378	6553	119	425

2009/10	25730	25345	914	9030	340	1346	447	303	6594	157	691
2010/11	24512	24846	367	9435	340	1691	448	233	6624	197	1294
2011/12	23786	25758	215	10177	476	1523	557	325	7296	146	1568
2012/13	22955	25546	140	9340	543	1533	700	416	6119	219	1664
2013/14	21355	23936	213	9650	393	1695	726	396	6417	206	2038
2014/15	21641	23516	143	8315	366	1010	791	398	5893	246	2440
2015/16	16710	21957	147	8100	405	1152	847	317	5526	197	2021

Source. Statistical Yearbook of the Republic of Macedonia

Legend. **A** – regular primary education, **B** – regular secondary education, **C** – higher vocational education, **D** – total higher education, **E** – natural sciences and mathematics, **F** – technical and technological sciences, **G** – medical sciences, **H** – biotechnology science, **I** – social sciences, **J** – Ph.D., **K** – masters and specialists

5. SOME INDICATORS FOR THE HEALTH AND SOCIAL CARE ACTIVITIES SECTOR

In the previous reviews we saw that in the period 2004-2016 the number of employees in the sector of Health and Social Care Activities sector increased from 30861 to 38259 employees, ie by 23.92%. There is a widespread opinion that there is a drastic increase in administrative and technical staff in this sector, so we will briefly look at the situation by analyzing the health protection data published by the SSO (Table 9).

From data in Table 9 it can be seen that in 2004, the health care sector employed 22877 people, i.e. 74.13% of the total number of employees in the Health and Social Care sector, while in 2015 it was 30467 employees, which is 84.04% of the total number of employees in the relevant sector. Given the increase in the number of employees in the health sector and their percentage share in the relevant sector, it can be said that the allegations of lack of health care workers are disputed. However, besides healthcare professionals, there is also a significant number of administrative and technical staff in healthcare, so we will analyze in more details the structure of health system employees.

From the data in Table 9 it can be seen that the number of doctors increased from 4490 in 2004 to 5975 employees in 2015, an increase of 33.07%. At the same time, the number of dentists increased by 60.85%, the number of pharmacists increased by 219.57%, and the number of healthcare workers increased by a whopping 335.57%. When it comes to nurses, the corresponding increase is 34.31%, while the number of administrative-technical staff has increased by only 3.75%, whereby this increase is due to employment in 2015, as the number of administrative-technical staff in 2014 was lower by 11.38% than in 2004.

Table 9. Health and administrative-technical workers in the period 2004-2015

	Total	Doctors	Dentists	Pharmacists	Healthcare workers	Nurses	Admin.-technical p.
2004	22877	4490	1134	322	447	5870	5528
2005	21189	4392	706	205	456	5697	5286
2006	22970	5134	1175	187	467	6119	5210
2007	23974	5052	1310	571	582	5751	4840
2008	25749	5364	1381	649	736	7033	5038

2009	25885	5364	1435	680	899	7249	5052
2010	26985	5541	1599	692	1045	7463	4980
2011	27462	5649	1622	782	1104	7488	5199
2012	27890	5755	1652	888	1502	7421	4894
2013	28664	5804	1705	930	1888	7587	4816
2014	28318	6035	1762	1002	1908	7749	4899
2015	30467	5975	1824	1029	1947	7884	5736
Source. Statistical Yearbook of the Republic of Macedonia							

Given the above mentioned, it can be said that the claims of mass recruitment of administrative and technical staff in the health care system at the expense of health workers is exaggerated. In addition to this statement is the fact that according to the SSO data, the percentage of doctors, dentists, pharmacists and healthcare workers in the total number of health workers increased from 27.95% in 2004 to 35.37% in 2015. At the same time the number of health workers with higher and secondary education increased from 10529 in 2004 to 13518 in 2015, which means that its percentage share has dropped from 46.20% to 44.37%, which is not the case for nurses where the percentage share from 25.65% in 2004 decreased to 23.99% in 2007 and then increased to 28% in 2009 to decrease to 26.61% in 2012 and 25, 88% in 2015, which is at the level of 2004.

When it comes to the health care system, let's say that according to the SSO data, the share of health care workers in the total number of employees in the health care system increased from 73.97% in 2004 to 79.74% in 2015, therefore it can be concluded that the negative situation in health is not caused by the alleged excessive employment of administrative and technical staff as it is marketed to the public, but rather by poor management of the health system.

At the end of this section we will consider the change in the number of pension beneficiaries and the ratio of the total number of employees and the number of employees in certain sectors. According to the data from Table 10 in the period 2004-2016 the number of pension beneficiaries is constantly increasing and it has increased from 260075 in 2004 to 307610 pension beneficiaries in 2016, which is an increase of 18.28%.

Table 10. Beneficiaries of pensions in the period 2004-2016						
	Disability pensions	Personal retirement pensions	Family pensions	Agricultural pensions	Military pensions	Total
2004	51589	137840	70646	0	0	260075
2005	50180	142827	72145	0	0	265152
2006	49364	146852	73465	0	0	269681
2007	48054	150075	74257	3300	2563	278249
2008	48562	149682	75037	2672	2420	278373
2009	47948	150092	75937	2209	2277	278463
2010	46118	151894	75739	1817	2161	277729
2011	44895	156016	76530	1443	2007	280891

2012	43658	162086	76660	1124	1953	285481
2013	42471	169362	77011	880	1827	291551
2014	41245	176157	76458	645	1710	296215
2015	39814	182954	76872	483	1605	301728
2016	38343	190633	76790	357	1487	307610
Source. Statistical Yearbook of the Republic of Macedonia						

This tendency has reduced the ratio of the number of pension beneficiaries to the total number of employees, from 0.63 per employee in 2004 to 0.58 per employee in 2016, so we can say that according to this indicator we have a positive trend. However, if we look at the ratio of the number of pension beneficiaries and the number of employees in the Manufacturing sector, we notice that it has increased from 2.29 pensions per employee in 2004 to 2.76 pensions per employee in 2016, which is an extremely negative indicator. Similarly, in 2004 we have 1.61 pensioners per employee in the sectors of Agriculture, Forestry and Fisheries, Mining and Quarrying, Manufacturing and Construction, and in 2016 this ratio is even 1.96. The full answer to the question of what these changes mean is subject to a more detailed and comprehensive analysis, but it can safely be said that such changes do not serve the purpose of stable economic development of the Republic of Macedonia.

6. COMMENTS ON THE RESULTS AND CONCLUSIONS

The analysis of some indicators obtained using the LFS shows that some of the data obtained are extremely illogical. To see if the illogicalities of the data generated are due to the adaptation of the LFS methodology or its incompatible implementation requires a detailed analysis of the LFS methodology and how it is implemented, but it can be said with certainty that LFS should not be used to determine the active population, as well as to calculate employment and unemployment rates. In order to obtain indicators that will determine the active population and calculate the real employment and unemployment rates it is desirable to carry out the following activities:

- » to conduct a census of the population and households, whereby the process of implementation will be free of daily politics and issues affecting the Framework Agreement,
- » after the census is conducted, in order to continuously monitor the number of real population present in the Republic of Macedonia (according to all indicators), to use the integrated border system, which with a slight adjustment can give an indication whether a citizen of Republic of Macedonia who exits and enters the state is absent from it for a longer or shorter period of time, i.e. whether his absence is of a business, tourist or expatriate nature,
- » to increase the coverage of business entities in tracking the number of employees by sector and departments of businesses. The received data should be continuously compared with the data from Public Revenue Office, Health Insurance Fund and the Pension Fund,
- » to reorganize the work of the Employment Service Agency in order to get a realistic picture of the unemployed.

The analysis of employees by sectors and sectors of activity showed that the structure of employees has significantly changed in the period under review. As we have seen, the change in structure is at the expense of the sectors of Agriculture, Forestry and Fisheries, Mining and Stone, Construction and Manufacturing, where we have an incredible decline of 9.9% in their share of total employees. Such a decline points to the misguided economic policies pursued in the period under review, and to the fact that continued campaigns to attract foreign investment have not only failed to yield the expected results, but can be said to have been subsidized for some other, primarily internal political and propaganda purposes, as well as taking care of many people as economic promoters and officials in relevant agencies and dozens of free economic development zones.

Although at first glance it seems that the negative trends in the structure of employees does not affect the education sector, a brief analysis of the situation in this sector shows that in the period considered:

- » the number of students in primary education decreased by 24.01%, so in the school year 2015/16 the average number of participants per class is 17.43, which is 27.38% below the legally allowed minimum, and the number of teachers increased for 29.01%,
- » the number of students in secondary education decreased by 20.83%, but 25 new secondary schools were opened, so in the 2015/16 school year the average number of students per class 22.52, which is 9.92% below the legally allowed minimum, and the number of teachers increased by 24.32%,
- » the number of higher education institutions has increased by an incredible 99 high schools and faculties, which is an incredible 330% increase, but the number of teachers has increased by only 76.59%, so it makes sense to ask who is conducting the teaching at higher education institutions, and what is the quality of the staff that is produced by them, and
- » the production of an average of 69.69% of highly educated staff in the field of social sciences and 6.38% in the medical field continuously disrupts the labor market, which has lasting effects on the overall development of the Republic of Macedonia.

In view of the above, we believe that in the past period there has been a continued mismanagement of the overall education system, leading to the present situation and irrational spending of taxpayers' money, which could be partially improved if:

- » concerning the number of students per class, harmonization of the work of the schools in primary education with the existing legislation, which will certainly result in reorganization of the primary education network, because as we could see in the observed period there is a trend of decrease in the number of students in primary education, which in view of the demographic movement will continue in the future;
- » with regard to the number of students per class, harmonization of the work of the schools in secondary education with the existing legislation, which will certainly lead to the reorganization of the network of secondary education, as it is illogical to constantly reduce the number of students, which taking into account the fact that in the 2015/16 school year compared to the 2014/15 school year the number of students who have completed primary education has decreased by 22.78%, this trend will continue and in the future;

- » A new approach to the reorganization of higher education and changing curricula, whereas this segment of the education system, in line with the European Union's recommendations in the future, should produce staff that will develop a knowledge-based economy, which certainly cannot be achieved with the staff currently being produced;

In the relevant Health and Social Care sector, in order to realistically see the consequences and provide recommendations and guidance for future actions, it is necessary:

- » conduct a census of the population and households, so that the network of health institutions and the need for staff should be effectively planned, and to see if the current situation corresponds to world standards;
- » It is necessary to involve doctors and experts in health management in the process, so they could clearly make a distinction between primary, secondary and tertiary health care, which should be dimensioned according to real needs, the result should be improved health care and rational spending of available funds.

LITERATURE

1. Malcheski, S. (2014). Outputs of the Subsystem for Secondary Education and the Labor Market in Republic of Macedonia, International Journal of Science and Research, Vol. 3, Issue 9, pp. 246-251
2. Малчески, Р., Малчески, С. (2012). Структурата на високото образование, предуслов за развој на економија базирана на знаење, Зборник трудови на научна конференција на ЕИ-Скопје, стр. 259-273
3. Statistical Yearbook of the Republic of Macedonia 2005-2017, State Statistical Office
4. Labor force survey 2005-2017, State Statistical Office
5. Tissen, R. et al. The knowledge dividend: Creating high performance companies through Value-based knowledge management, ASEE Books, 2006