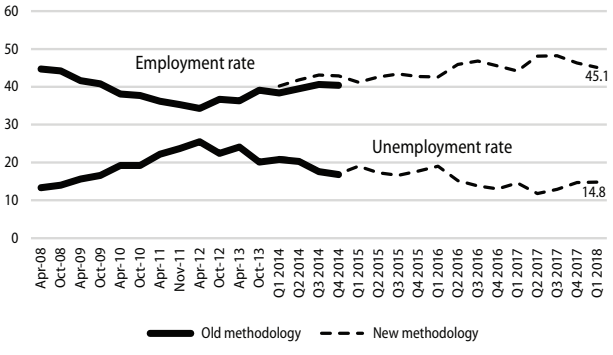
3. Labour Market

According to the Labour Force Survey (LFS) data, mild improvements in the basic labour market indicators in Serbia were noticed in Q1 2018 compared to the same quarter of the previous year. The activity, employment and unemployment rates recorded a slight y-o-y growth. The employment rate was 45.1%, while the unemployment rate was 14.8%. The number of employed persons was 2,688 thousand, while the number of persons in formal employment was 2,188 thousand. The rate of informal employment was 18.6%. Total and formal employment increased compared to the same quarter of the previous year, while informal employment declined y-o-y. Data from the Central Register of Compulsory Social Insurance (CRCSI) show employment growth compared to the same quarter of the previous year by 3.3%. Registered employment recorded a higher growth compared to formal employment by LFS (1.9%). According to CRCSI, the number of employees in the public sector has dropped in the past year, while the number of employees outside the public sector has increased. In the observed period, the real growth rate of gross value added (GVA) was 5%. Employment growth (LFS) is lower than the GVA growth, which was not the case in the previous period. Employment rose the most in construction, 20.5% y-o-y, while GVA growth in this activity was 26.4%. Employment has also increased in industry, while it has decreased in agriculture and services. In 2018, the Statistical Office of the Republic of Serbia (SORS) took over the data from the Tax Administration (TA) and ceased to implement the RAD-1 survey. The data based on the new methodology exists for 2017 as well, but it doesn't include the monthly data by activity, which prevents us from adequately performing year-on-year comparisons of earnings per activity, as well as of the comparable unit labour costs excluding agriculture. Average net wages were nominally higher by 5.5%, and in real terms by 3.8% in Q1 2018 compared to the same quarter of the previous year (TA data for 2017). Average public sector earnings were 20.6% higher than non-public sector in Q1 2018. Labour productivity increased y-o-y by 1.6%, while unit labour costs increased by 4.7% (RAD-1 data for 2017). Compared to the 2014 average, productivity has declined, real wages have increased, while unit labour costs increased significantly by 15% for the total economy, or 12.3% excluding agriculture. Significant growth in real earnings in Q1 2018 compared to the average of 2014 of 3.3% was the result of changing the methodology of calculating wages. Therefore, we consider that the growth of unit labour costs is lower, and that it is at the level of previous years. It is necessary that SORS also publishes monthly data by activities for 2017 according to the TA, so that it is possible to fully analyse the earnings including the previous year.

Both the employment and unemployment rates recorded a year-on-year growth

Graph 3-1. Employment and Unemployment Rates, 15+

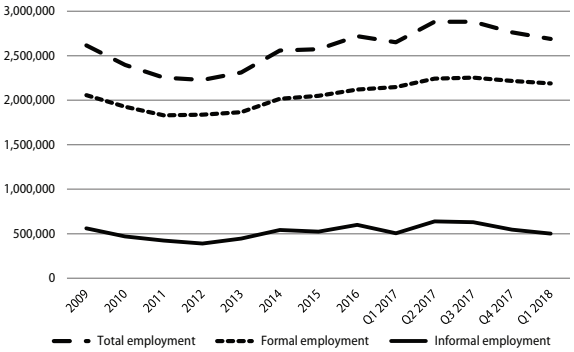


Note: Due to a change in methodology, the data for the period before and after 2014 are not fully comparable.
Source: SORS, LFS

Employment and Unemployment

Basic labour market indicators according to LFS show moderate improvements. The activity rate was 52.9% in Q1 2018 and was higher by 1.1 pp compared to the same quarter of the previous year. The employment rate was 45.1%, which was an increase of 0.8 pp, while the unemployment rate increased by 0.3 pp in Q1 2018 compared to Q1 2017. The unemployment rate was 14.8%. Graph 3.1 shows the trends of the employment rate and the unemployment rate according to LFS.

Graph 3-2. Trends in Total, Formal and Informal Employment, 15+



Note: Due to a change in methodology, the data for the period before and after 2014 are not fully comparable.
Source: SORS, LFS

The number of unemployed in Q1 2018 amounted to 469 thousand, which was 16 thousand more compared to the same quarter of the previous year, i.e. 3.5% more. Compared to Q1 2017, the number of active persons increased, while the total population decreased, resulting in an increase of activity rate by 1.1 pp. The total number of employees is 2,688 (in thousands), the number of formal employees is 2,188 (in thousands), while the remaining 500 (in thousands) are informally employed. The movement of total, formal and informal employment is shown graphically (Graph 3.2).

Total and formal employment are increasing, informal employment is decreasing

Total employment increased y-o-y by 1.4%, while formal employment increased by 1.9%, and informal employment decreased by 0.8%. The informal employment rate was 18.6%, and it was lower by 0.4 pp compared to the same quarter of the previous year. The informal employment rate had the lowest value since 2012. Table 3.1 shows the movement of employment and GVA by sector. The real growth rate of GVA was 5% y-o-y, and was higher than the rate of total and formal employment (LFS) and registered employment (CRCSI). In the previous period (Q2 2016-Q3 2017), the trend was reversed, the growth rate of total employment according to the LFS was significantly higher than the GVA growth rate. Employment growth was achieved in industry and construction, while agriculture and services recorded a decline in employment. The growth of employment in construction was extremely high, 20.5% y-o-y, but in the observed period, GVA increased as well, by 26.4%. CRCSI data show that registered employment has increased by 3.3%, which is in line with the trends in economic activity.

Registered employment (CRCSI) increased by 3.3% year-on-year

Growth of registered employment (CRCSI) was higher than the growth of formal and total employment (LFS)

Observed by economic activity, employment increased in industry and construction, and decreased in agriculture and services

Table 3-1. Trends in the number of employees and real GVA by sectors, 15+, year-on-year change, %

	2016				2017				2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Total employment CROCSI	-0.3	1.2	1.3	2.1	2.3	2.6	2.7	2.8	3.3
Formal employment LFS	1.9	2.7	3.8	5.2	4.9	5.1	5.5	2.6	1.9
Total employment LFS	2.7	6.7	7.2	5.8	3.2	4.3	2.4	1.2	1.4
Total GVA	4.6	2.1	3.3	2.8	0.6	1.5	2.3	2.6	5.0
Employment- agriculture	-3.7	6.0	6.1	-3.4	-8.0	-1.6	-2.9	-7.8	-7.1
GVA-agriculture	7.5	4.4	11.6	7.8	-6.3	-9.1	-11.9	-9.5	6.1
Employment-industry	4.2	7.8	7.9	7.6	9.3	8.4	7.7	6.3	12.0
GVA-industry	6.6	-0.8	2.0	2.9	0.4	3.5	6.4	3.7	5.3
Employment-construction	-2.9	4.0	-2.1	-1.8	-12.6	8.2	-0.6	2.5	20.5
GVA-construction	9.5	4.6	5.4	-3.5	-3.7	-2.1	6.0	17.9	26.4
Employment-services	4.7	6.8	8.2	9.1	5.7	4.6	2.7	2.0	-1.2
GVA-services	3.2	2.7	2.2	2.6	2.4	3.1	2.8	2.8	3.3

Note: The data source for employment was LFS, except for total employment, which used both LFS and CRCSI data. GVA data for 2017 and 2018 are estimated values.
Source: Authors' calculations based on data from SORS (LFS, CRCSI and SNA).

Year-on-year decrease in the number of public sector employees was 1%, while the growth outside the public sector was 6.1%

During 2017 and in Q1 2018, public sector employment declined, while it grew in the private sector

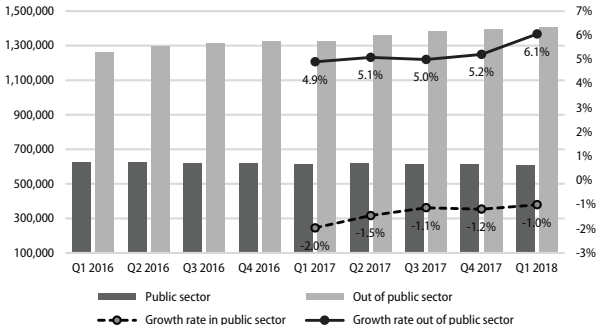
The data available to us was on the number of employees in the public and private sectors from Q1 2016 according to CRCSI. The number of employees, as well as the growth rate, are shown in Graph 3.3. In the public sector in Q1 2016, almost 625 thousand were employed, while in Q1 2018 this number was reduced to about 606 thousand (in the absolute amount, the number of employees decreased by 18,448 or 3%). Outside the public sector, the number of employees increased by about 142 thousand, or 11.3% in the same period. During 2017 and Q1 2018, we see that in all quarters, there has been a y-o-y decline in the number of employees in the public sector and an increase in the number of employees outside the public sector. The highest year-on-year growth in the number of employees outside the public sector was achieved in Q1 2018, when it was 6.1%.

Wages[1]

Wages increased nominally by 5.5%, and in real terms by 3.8%, year-on-year

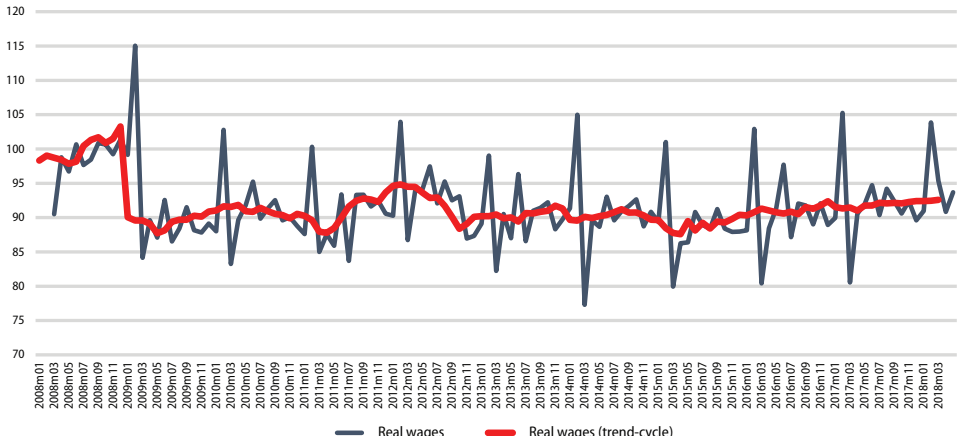
Average net salary for the first three months of 2018 was 49,088 RSD, nominally higher by 5.5%, while in real terms it was 3.8% compared to the same period of the previous year (TA data for 2017). Graph 3.4 shows the movement of average real net wages, as well as the movement trend relative to the base period (average 2008). We can observe that the real earnings index is still below 100, but there is a slight increase.[2]

Graph 3-3. Employment trends in public and private sectors, number (the left axis) and year-on-year change in % (the right axis)



Note: Data for Q1 2018 is previous data.
Source: CRCSI, SORS.

Graph 3-4. Index of real average net wages (2008=100)



Note: Due to a change in methodology for calculating wages, the data prior to January 2018 is not comparable.
Source: Authors' calculations using SORS data.

Average wages in public sector were higher by 20.6% than in the private sector

Fiscal consolidation affected the reduction in the wage difference between public and private sector

By switching to TA data, data on average wages in the public and private sectors are published as of Q1 2018. Average public sector wages amount to 55,345 RSD, while in the private sector they amount to 45,880 RSD. Average public sector wages were 20.6% higher than average wages in the private sector. Comparison of average wages does not take into account differences in characteristics of employees in the public and private sector, and the fact that registered private sector wages are underestimated due to the large informal employment. Also, in the private sector, it is common practice that some of the salaries of formal employees are paid out in cash (i.e. envelop wages), which is not covered by official statistics.[3] Fiscal consolidation, which implied a 10% reduction in public sector wages in early 2015, led to a reduction in the wage gap between public and private sector employees. Vladisavljević (2017) examines how fiscal consolidation has affected the differences in wages between the public and private sector using LFS micro data. Average wages in the public sector were 30.2% higher than average wages in the private sector in 2014, while in 2015 the difference was 24.5%. Public sector wage premium in 2014 (before fiscal consolidation) was 17.4%, when controlled for the characteristics of employees in the public and private sector (education, work experience, gender, etc.). As a result of 10% wage cuts in the

1 Since January 2018, SORS has been using a new data source for wages, which we wrote about in the previous issue of QM. Data for 2017 follow the new methodology, but data is only available for average monthly net and gross wages, while average monthly wages per economic activity are not available for 2017. Since we were not able to analyse the whole part of wages, as well as unit labour costs using revised data for 2017, we used unrevised data for 2017, unless otherwise stated. The data before January 2018 are not directly comparable.
2 Change in statistical methodology at the beginning of 2009 resulted in a 10% reduction in wages. Therefore, we estimate that real wages now are approximately equal to the wages from 2008.
3 The definition of informal employment does not include employees who are partially paid in cash, and are usually registered for minimum wage or slightly higher than that. Informal employment includes employees in unregistered companies, employees in registered companies, but without a labour contract and unpaid household members (SORS).

public sector, the public sector wage premium was reduced to 11.3% in 2015.[4] The average wage gap between public and private sector was reduced in 2016 and 2017, and was 18.2% in 2017. However, since the beginning of 2018, wages have increased by 9% in the general government sector, which has again increased the gap between the wages generated by both public and private sector, so that in the first quarter it was 20.6%.

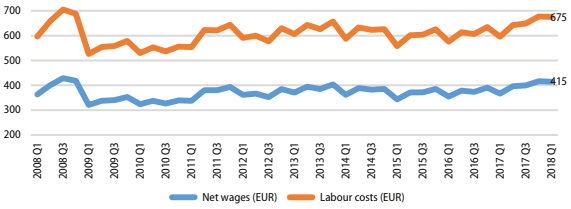
High growth of wages in the public sector deteriorates the economy's competitiveness and increases the labour market distortions

Growth of real wage in a country is determined by the growth of productivity.[5] In addition, the growth of total productivity in the country crucially depends on the growth of productivity in the sector of tradables (industry, agriculture, etc.), which in market economies are dominantly present in the private sector. Most of the activities in the public sector (security, justice, education, health, etc.) belong to the sector of non-exchangeable goods characterised by lack of growth or slow growth of productivity.[6] It follows that the sustainable[7] growth of wages in the country implies that productivity growth in the sector of tradables determines the growth of wages in that sector, and that wages in the sector of nontradable goods, including the public sector, follow their growth. If public sector wages grow faster than private sector ones, given the fact that the state is the largest employer, it puts pressure on the labour market to increase private sector wages too quickly, resulting in the country's total wages growing faster than productivity. Faster growth of wages than productivity growth weakens the competitiveness of the economy, resulting in foreign deficit, foreign debt increase, and deteriorated position of the country's total assets. Of course, this may take several years and ends with a real decrease in wages through inflation, and sometimes a nominal reduction in wages, due to a fiscal or balance of payments crisis. Therefore, for the stability of public finances, but also for overall macroeconomic stability, it is important that wages in the public sector follow the movement of wages in the private sector, and not vice versa.[8]

Growth of average net wages in EUR was 10.4%, year-on-year

Growth of wages in EUR was significantly higher compared to the nominal growth of 5.5% in RSD, which was the result of the appreciation of the dinar

Graph 3-5. Trends in net wages and labour costs in euros



Note: Due to a change in methodology for calculating wages, data prior to January 2018 is not comparable.
Source: Authors' calculations using NBS data.

The average net salary in euros in Q1 2018 was 415 euros, while the employer's costs amounted to 675 euros. Average wages in euros and the costs of employers increased y-o-y by 10.4% and 9.9% (TA data), respectively. Significantly higher growth in wages in euros relative to the growth in dinars was the result of the strengthening of the dinar. The average exchange rate in Q1 2017 was 123.9 RSD / EUR, while in Q1 2018 it was 118.4 RSD / EUR. Movement of wages and labour costs in euros was significant from the aspect of the economy's competitiveness, which depends to a large extent on whether the price of labour is competitive. Labour is the most important non-exchangeable good in world economy[9], so the international competitiveness of a country depends largely on whether its average wages are expressed in a global currency in line with average productivity. Due to the significant strengthening of the dinar, wages in euros and labour costs in Serbia are growing much faster than productivity growth, resulting in the deterioration of the country's international competitiveness.

4 Vladisavljević, M. (2017), „The public sector wage premium and fiscal consolidation in Serbia", Economic Annals, Vol. LXII, No. 215/ October-December 2017, http://www.ekof.bg.ac.rs/wp-content/uploads/2014/04/492.pdf

5 See the Vuksanović & Arsić article from the previous issue of QM.

6 In these activities (education, health, etc.), progress is achieved by increasing the quality of services, while productivity growth, if any, is very slow.

7 Sustainable wage growth implies such growth that does not lead to a large increase in foreign debt, nor the elimination of investments, which undermines the future growth of the economy.

8 More detailed argumentation can be seen in the Fiscal Council's analysis "Public Sector Wages: Current Condition and Guidelines", (2018).

9 Labour markets are still predominantly national, as there is no global labour market, except in some segments that still include a small percentage of the workforce, so the average wage levels vary from one country to another by several dozen times. Due to globalisation, the differences in the prices of other products (raw materials, equipment and final products) by countries differ less and usually range from a few percent to dozens of percent.

Labour Productivity

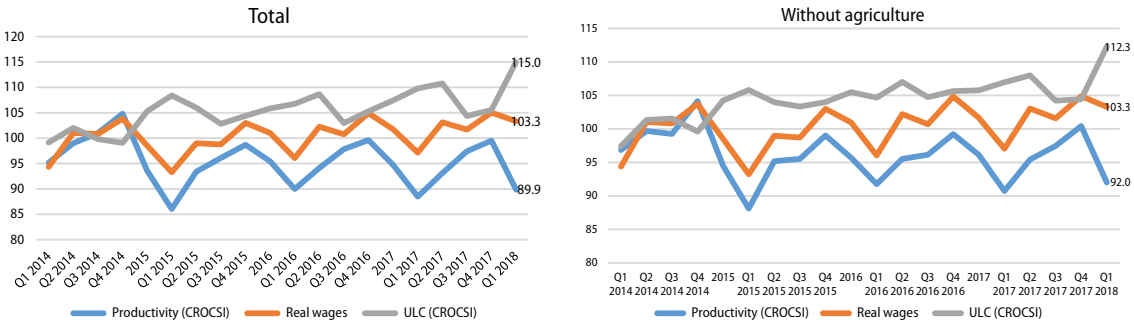
Compared to the same quarter of the previous year, unit labour cost has increased by around 5%

Compared to the 2014 average, labour productivity has declined, real wages have increased, and unit labour cost has significantly increased

In Q1 2018, growth of real wages compared to the 2014 average was significantly higher compared to the first quarters of the previous year, which is the result of the change in methodology for calculating wages

In Q1 2018, compared to the same quarter of the previous year, productivity slightly increased by 1.6%, but unit labour cost also increased (4.7%), due to the higher growth of wages than labour productivity. Unit labour cost also increased (by 5%) in non-agricultural activities. According to CRCSI, the level of productivity in Q1 this year compared to the average of 2014 was lower by 11.1%.[10] Real wages increased by 3.3% in the same period, which led to a 15% rise in unit labour cost. In the first quarter of the previous years (2014-2017), real wages were less than the 2014 average, while in Q1 2018 this was not the case. The reason is the change in the methodology of calculating wages, where there is no such difference at the end of the year.[11] When we look at the non-agricultural sector, productivity has slightly decreased relative to total productivity, by 8% compared to the 2014 average, and unit labour cost increased by 12.3%. The trends in the labour productivity index, real wages and unit labour cost are shown in Graph 3.6.

Graph 3-6. Labour productivity, real wages and unit labour cost, indices (2014=100), 2014-Q1 2018.



Note: CRCSI data used for the number of employees. Data for unit labour cost prior to January 2018 is not directly comparable, due to the change in methodology for calculating wages. GVA data for 2017 and 2018 are estimated values.
Source: Authors' calculations using SORS data.

Annex 3-1. Basic labour market indicators according to LFS and CRCSI

	2014					2015					2016					2017				2018
	Q1	Q2	Q3	Q4	prosek	Q1	Q2	Q3	Q4	prosek	Q1	Q2	Q3	Q4	prosek	Q1	Q2	Q3	Q4	Q1
Activity rate (%)	51.0	52.6	52.5	51.6	51.6	50.8	51.5	52.0	51.9	53.3	52.6	54.1	54.3	52.3	54.0	51.8	54.5	55.3	54.2	52.9
Employment rate (%)	40.2	41.8	43.1	42.9	42.5	41.2	42.6	43.4	42.7	45.2	42.6	45.9	46.8	45.5	46.7	44.2	48.1	48.2	46.3	45.1
Unemployment rate (%)	21.3	20.7	17.9	17.0	17.7	19.0	17.3	16.6	17.7	15.3	19.0	15.2	13.8	13.0	13.5	14.6	11.8	12.9	14.7	14.8
Informal employment rate (%)	19.7	20.4	22.8	21.8	20.4	19.7	19.7	21.5	20.4	22.5	20.3	22.7	24.1	20.9	20.7	19.0	22.1	21.8	19.8	18.6
Employment in 000, (LFS)	2,454	2,548	2,627	2,609	2,574	2,504	2,588	2,624	2,581	2,719	2,571	2,762	2,814	2,731	2,795	2,652	2,881	2881.9	2763.6	2688.3
Employment, index, (2014=100), (LFS)	95.9	99.6	102.6	101.9	100.6	97.8	101.1	102.5	100.8	106.3	100.4	107.9	109.9	106.7	109.2	103.6	112.6	112.6	108.0	105.0
Formal employment in 000, (LFS)	1,969	2,030	2,028	2,041	2,050	2,011	2,078	2,059	2,054	2,137	2,049	2,135	2,137	2,161	2,215	2,148	2,243	2253.5	2217.2	2188.2
Formal employment, index, (2014=100), (LFS)	97.6	100.6	100.5	101.2	101.7	99.7	103.0	102.1	101.8	105.9	101.6	105.9	105.9	107.1	109.8	106.5	111	112	110	108
Total employment in 000, (CROCSI)	1,836	1,845	1,850	1,851	1,987	1,977	1,982	1,994	1,994	2,010	1,978	2,008	2,023	2,030	2,061	2,024	2,062	2,078	2,087	2,092
Total employment, index, (2014=100), (CROCSI)	99.5	100.0	100.3	100.3	107.6	107.1	107.4	108.0	108.0	108.9	107.2	108.8	109.6	110.0	111.7	109.7	111.7	112.6	113.1	113.4

Source: Authors' calculations using SORS data.

Annex 3-2. Real net wages and labour productivity

	2014				2015				2016				2017				2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Average real net wages, index, (2014=100)	94.3	101.0	100.8	103.8	93.3	99.0	98.8	103.0	96.1	102.2	100.7	104.9	97.2	103.1	101.7	105.0	103.3
Average net wages, total, (€)	361	389	383	386	343	371	372	386	355	378	373	391	367	399	398	416	415
Average net wages, industry, (€)	359	382	378	378	351	376	379	389	369	391	382	399	376	417	411	429	404
Labour coss, total (€)	588	633	623	626	557	601	603	626	576	613	607	635	596	648	647	677	676
Labour costs, industry (€)	582	622	617	615	570	611	617	632	599	635	623	649	611	677	669	699	658
Productivity, without agriculture, index, (2014=100)	96.9	99.7	99.3	104.2	88.1	95.2	95.5	99.0	91.8	95.5	96.1	99.2	90.7	95.4	97.5	100.4	92.0
Productivity, total, index, (2014=100)	95.2	99.0	101.0	104.8	86.1	93.4	96.1	98.7	90.0	94.1	97.8	99.6	88.5	93.1	97.4	99.5	89.9

Note: Industry includes activities B, C and D, weighted average of wages. Dinar exchange rate against the euro, period average (NBS). Labour productivity is calculated using registered employment data. GVA data for 2017 and 2018 are estimated values. Due to changes in the methodology of calculating wages, data prior to January 2018 is not comparable.
Source: Authors' calculations using SORS and NBS data.

10 Although we estimate that CRCSI now measures well the registered employment, it is possible that at the beginning of its work, the full scope of registered employment has not yet been reached. In this case, real growth of registered employment in the period 2014-2018 was lower than that of the CRCSI data, which is why the decrease in productivity and the growth of unit labour cost in this period was lower than what the data show.

11 Remember that the comparison of average net wages according to TA and RAD-1 data for 2017 shows that in January wages according to TA were 12.4% higher than according to RAD-1, while in December wages according to TA were 10.3% lower than according to RAD-1 (http://publikacije.stat.gov.rs/G2018/Pdf/G201822001.pdf).