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## Wages and salaries analysis of new the European Union Member States

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**Abstract**

The aim is to analyse wages and salaries before and after the economic crisis of new the EU Member States with special emphasis on former Soviet Bloc countries from Central and Eastern Europe (CEE-8) and the Baltic States, and to compare them on the level of the old Europe (EU-15) and Commonwealth of Independent States (CIS-4) countries. The literature review shows the quality of life is in previous publications of authors. The Eastern European countries were part of the Soviet Bloc. Based on this and previous publications, is made a number of generalized suggestions.

**Keywords:** wages and salaries, quality of life, Europe, former Soviet Bloc countries

**1. Introduction**

The background of Eastern European countries, that were part of the former Soviet bloc, is more detail in the works of other authors [1 - 2] and in previous earlier publications of authors [3 - 10]. One important indicator quality of life is salaries, that here will analyze. The situations before the economic crisis, during the crisis and after the crisis will be viewed. How ex-post-socialist countries have been the crisis? We make comparisons with EU countries, particularly in the developed economies, the old EU-15 and Baltic and also the CIS-4 countries. The *theoretical bases* and *methodology* have been brought in more detail in the authors' earlier works [11 - 23]. *Definitions* used from Eurostat [24]. All *figures* are the authors' illustrations.

**2. Monthly earnings**

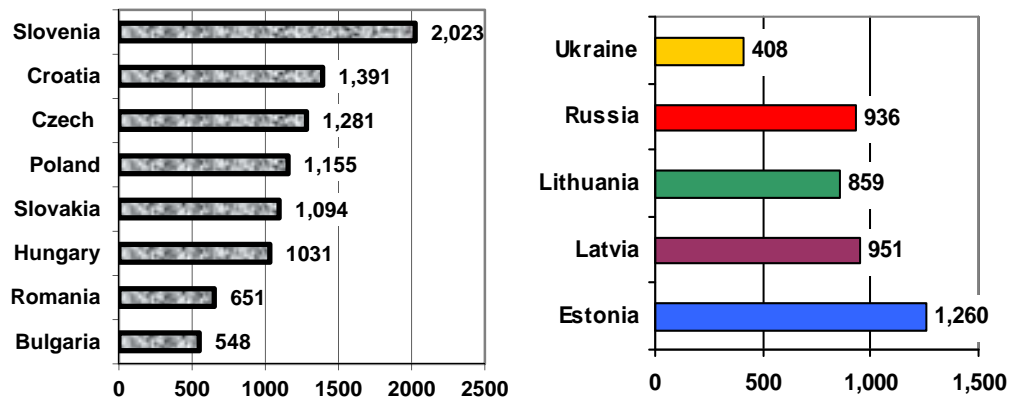


Fig 1: Average gross earnings for selected Europe countries, USD, 2013 [25]

A comparative analysis of average gross earnings is important. Slovenia and Bulgaria differed by 3.7 times. However, the economies of the two counties with the highest wages, Slovenia and Croatia, have declined in recent years, but nevertheless Slovenia had the highest GDP per capita among the post-socialist countries.

Estonia had the highest average gross earnings of the Baltic countries (1260), followed by Latvia (951) and Lithuania (859); only Romania and Bulgaria had lower gross wages. By comparison, the post-socialist country with the lowest total gross wages was Ukraine (408). In Russia (936), gross wages were only slightly below the Baltic states of Lithuania and the CEE-8 countries Romania and Bulgaria. The gross wages of Slovenia and Estonia were 2.16 times and 1.35 times greater than Russia's, respectively.

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The average wage alone is not enough to assess the quality of life. Consideration should be given to taxes, prices and other

direct and indirect factors.

**Table 1:** Average monthly gross earnings US\$ of former Soviet Bloc countries <sup>[26]</sup>

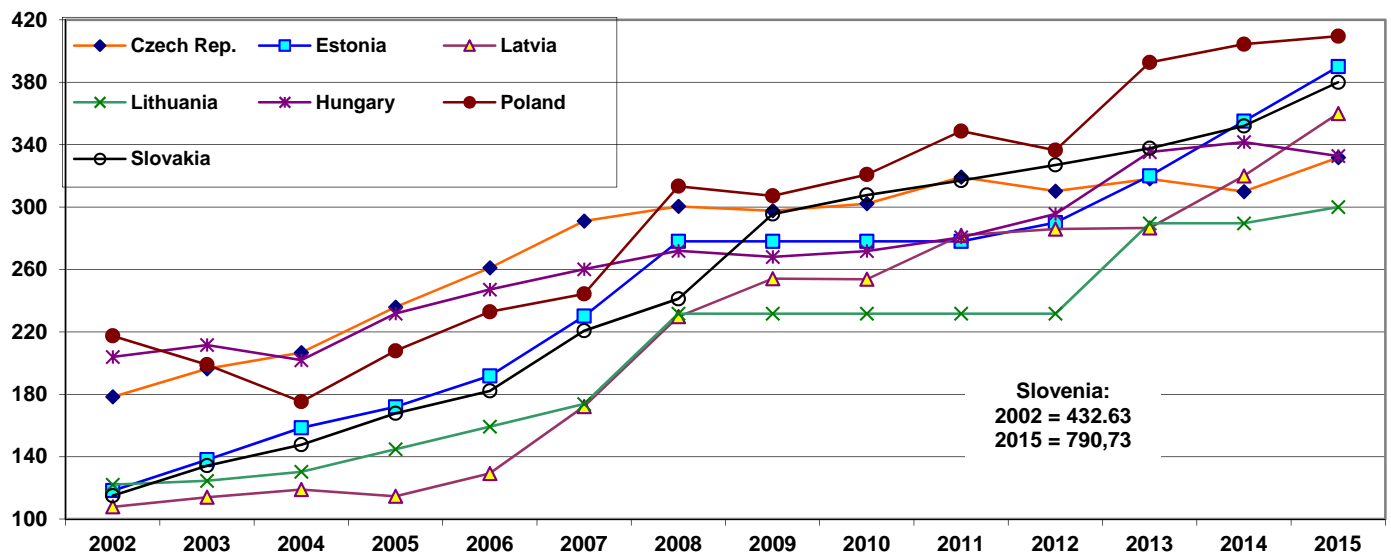
	1996	1998	2000	2002	2004	2006	2007	2008	2009	2010	2011	2013
Bulgaria	79	104	106	124	185	231	302	408	433	439	486	548
Croatia	597	649	588	682	992	1 136	1 313	1 529	1 460	1 396	1 459	1 391
Czech Rep	374	363	343	474	680	865	1 032	1 328	1 225	1 245	1 375	1 281
Estonia	248	293	289	370	579	755	991	1 208	1 090	1 049	1 156	1 260
Hungary	307	316	311	475	719	813	1 006	1 158	988	973	1 060	1 031
Latvia	180	225	248	280	391	539	775	998	912	839	918	951
Lithuania	155	233	243	276	413	544	714	913	828	763	823	859
Poland	324	355	443	523	627	798	973	1 222	996	1 069	1 147	1 155
Romania	138	149	131	161	253	408	573	699	605	599	667	651
Russia	154	108	79	139	234	391	532	697	593	695	802	936
Slovakia	266	284	247	298	491	632	814	1 020	1 039	1 019	1 094	1 094
Slovenia	954	951	861	980	1 375	1 521	1 761	2 046	2 007	1 982	2 122	2 023
Ukraine	69	62	42	71	111	206	268	343	245	282	330	408

The wages in all post-socialist countries have increased expeditiously in the analysed period, as a rule, by more than three times. The increase of the wages has also been constant, as a rule, but the crisis of 2009 led to a decline. In 2009, the wages only continued to increase in Bulgaria and Slovakia. Croatia, Hungary, Poland, and Romania of the CEE-8 countries, all of the Baltic States and Ukraine were still not able to achieve the record level of 2008 in 2011. The differences between the wages in post-socialist countries were very high. For example, the wages in Slovenia were 3.69 times higher than in Bulgaria, the CEE-8 country with the lowest wages, 2.16 times higher than in Russia, and 6.43 times higher than in Ukraine. In the period from 1996 to 2011, the wages grew by 6.15 times in Bulgaria, 3.68 times in Czech Republic, 4.11 times in Slovakia, and only 2.22 times in Slovenia. The basis of Slovenia in 1996 was also high compared to the other countries, in 2011, 6 countries remained below that level. In the period from 1996 to 2008, the wages

in Poland increased 3.77, in Estonia 4.87, in Latvia 5.54, in Lithuania 5.89, and in Romania 5.06 times. The highest wages in the Baltic States were in Estonia, which were, however, exceeded by three CEE-8 countries: Slovenia, Croatia, and Czech Republic. The wages in the CIS countries Russia and Ukraine increased 5.2 and 4.78 times, respectively, in the period from 1996 to 2011. In the crisis year of 2009, the wages were only USD 593 in Russia and USD 245 in Ukraine.

**3. Minimum wages**

The national *minimum wage* is enforced by law. This usually applies to all employees, or at least to a large majority of employees in the country. Minimum wages are gross amounts, that is, before deduction of income tax and social security contributions. Such deductions vary from country to country. <sup>[27]</sup>



**Fig 2:** Minimum wages in 2015, EUR/month <sup>[27]</sup>

Minimum wages in 2015 Croatia 395.61, Bulgaria 184.07 and Romania 217.5 EUR/month.

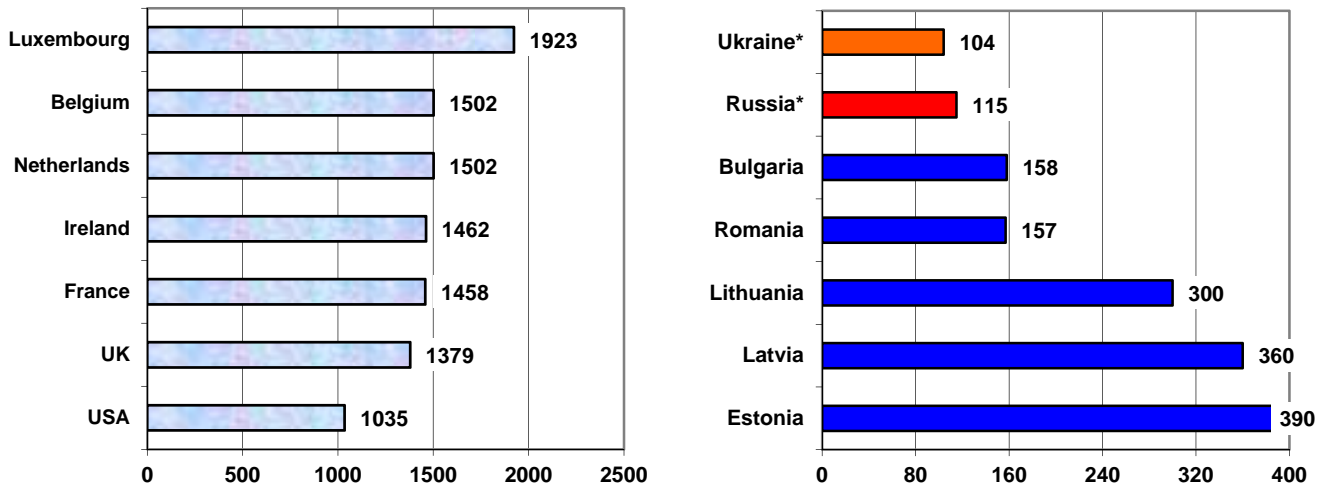


Fig 3: Minimum wages was in 2015, EUR/month [27]

Minimum wages are one of the important indicators of the quality of life. The table and the figures show that there are very large differences, up to 12 times in the EU and 5 times (!) in the CEE-8 countries. The differences between the Baltic countries were small. In 2013, the highest minimum wages in the EU-15 countries were in Luxembourg at €1923 a month, in the CEE-8 countries in Slovenia at €791, and in Estonia at €390. Bulgaria and Romania had the minimum wages of

€157–158. The minimum wages in Russia and Ukraine were (2012) €15 and €04. In Russia was it in 2014 5554 RUB. Of the CEE-8 countries, the minimum wages in Slovenia were in 2012 6.8 times higher than in Russia and 7.5 times higher than the minimum wages in Ukraine. [28]

4. Annual net earnings

Table 2: Annual net earnings, 2014, Euro [29]

	EU-28	USA	Japan	Switzerland	Sweden
Single person without children, 50% of average worker (AW)	12 397	15 234	14 022	32 622	18 622
Single person without children, 100% of AW	22 047	28 331	27 230	61 571	33 907
Single person with 2 children, 67% of AW	19 320	24 611	20 313	50 566	26 458
One-earner married couple, at 100% of AW, with two children	25 737	32 855	29 452	71 407	36 874
Two-earner married couple, one at 100%, the other at 100% of AW, with two children	46 679	59 504	56 171	128 982	70 781
Two-earner married couple, one at 100%, the other at 100% of AW, with no children	44 131	56 377	54 460	120 680	67 446

Table 3: Annual net earnings: single person without children, 100% of AW, Euro. [29]

	2005	2007	2008	2009	2010	2011	2012	2013	2014
EU (28)	21,265	22,076	21,547	20,763	21,050	21,453	22,345	22,708	:
EU (15)	25,639	26,339	25,724	25,264	24,850	25,283	26,391	26,501	27,104
USA	22,909	22,732	22,242	24,386	26,266	25,954	28,776	27,519	28,330
Estonia	:	6,942	494	:	7,820	8,324	8,812	9,445	9,990
Latvia	3,009	4,780	5,875	5,938	5,684	5,910	6,244	6,487	:
Lithuania	3,137	4,725	5,667	5,361	5,268	5,401	5,634	5,954	:
Hungary	4,860	5,249	5,734	5,409	6,256	6,109	6,177	6,430	6,384
Poland	4,965	6,163	7,195	6,093	6,829	7,054	7,008	7,429	7,613
Romania	2,329	3,482	3,960	3,578	3,972	4,233	4,004	4,146	:
Slovenia	:	9,820	10,556	10,782	11,284	11,567	11,707	11,824	11,925
Slovakia	:	6,212	6,808	7,108	7,305	7,404	7,573	7,725	7,977

Table 4: Annual net earnings: net earnings two-earner married couple, one at 100%, the other at 100% of AW, with two children, Euro [29]

	2005	2007	2008	2009	2010	2011	2012	2013	2014
EU (28)	45,050	46,772	45,677	44,082	44,688	45,500	47,347	48,123	:
EU (15)	54,333	55,781	54,523	53,619	52,765	53,633	55,926	56,165	57,422
Belgium	46,521	49,040	51,379	52,294	54,400	55,836	57,532	58,264	58,655
Denmark	53,708	57,756	60,024	62,741	65,618	66,617	68,114	68,886	69,464
Germany	48,970	50,883	52,407	52,744	55,683	57,182	58,421	59,222	60,702
Ireland	52,431	57,502	59,970	56,997	56,679	56,375	56,671	56,834	58,645
Greece	27,543	31,213	31,597	34,533	43,696	39,898	38,095	35,227	34,500
Spain	33,561	35,834	38,460	39,691	39,729	40,713	40,909	41,083	41,260
France	46,576	49,487	51,124	52,046	52,889	54,012	54,948	55,727	56,431
Italy	36,724	38,450	39,696	40,407	41,234	41,789	42,463	43,422	43,696
Luxembourg	71,421	74,718	77,554	80,292	81,608	81,895	84,043	84,812	85,907
Netherlands	54,796	59,551	60,788	64,242	65,555	66,989	68,273	70,574	71,044
Austria	50,084	52,457	53,500	56,055	56,739	57,876	58,911	60,166	60,877
Portugal	22,682	25,668	26,638	27,456	26,616	25,275	26,696	26,366	26,133

Finland	47,559	52,014	54,578	56,908	58,133	59,379	61,125	61,728	62,141
Sweden	49,233	55,582	56,325	53,390	60,918	65,497	69,946	71,089	70,781
UK	67,065	73,160	64,445	57,982	61,706	61,195	68,599	65,633	69,648
Norway	69,995	76,893	78,425	76,064	85,939	91,436	99,596	98,073	95,196
Switzerland	80,550	79,679	83,455	87,929	96,458	111,059	126,006	124,522	128,982
USA	48,445	48,003	47,061	51,138	55,218	54,550	60,423	57,749	59,503
Bulgaria	3,405	4,424	5,536	6,332	6,573	6,792	7,196	7,797	:
Czech Rep	11,833	15,245	18,325	17,935	19,120	19,788	20,084	19,354	18,927
Estonia	:	14,682	1,040	:	16,462	17,471	18,448	19,714	20,804
Latvia	6,402	10,162	12,529	12,641	12,194	12,686	13,366	13,904	:
Lithuania	6,688	9,873	11,749	11,240	10,693	10,959	11,425	12,066	:
Hungary	10,757	11,711	12,738	11,957	13,671	14,221	14,288	14,744	14,581
Poland	9,930	12,931	15,058	12,701	14,216	14,649	14,548	15,389	15,759
Romania	5,042	7,393	8,197	7,437	8,229	8,746	8,272	8,560	:
Slovenia	:	21,208	22,856	23,347	24,429	25,037	25,672	25,855	26,073
Slovakia	:	13,285	14,499	15,198	15,619	15,823	16,187	16,513	17,032

Table 5. Two-earner married couple, both at 100% of AW, with no children [29]

	2005	2007	2008	2009	2010	2011	2012	2013	2014
EU (28)	42,568	44,193	43,136	41,567	42,152	42,947	44,726	45,454	:
EU (15)	51,325	52,729	51,500	50,581	49,763	50,616	52,827	53,047	54,259
USA	45,804	45,453	44,215	48,489	52,233	51,625	57,258	54,754	56,376
Bulgaria	3,101	4,096	5,230	5,902	6,144	6,792	7,196	7,797	:
Czech Rep	11,174	13,924	16,691	16,573	17,624	18,249	18,436	17,759	17,421
Estonia	:	13,884	988	:	15,640	16,648	17,625	18,891	19,981
Latvia	6,019	9,561	11,751	11,877	11,369	11,820	12,489	12,974	:
Lithuania	6,274	9,451	11,334	10,722	10,536	10,802	11,269	11,909	:
Hungary	9,720	10,498	11,469	10,818	12,512	12,219	12,355	12,860	12,769
Poland	9,930	12,326	14,390	12,187	13,659	14,109	14,017	14,859	15,227
Romania	4,659	6,964	7,920	7,156	7,944	8,467	8,008	8,293	:
Slovenia	:	19,641	21,113	21,565	22,568	23,135	23,414	23,648	23,851
Slovakia	:	12,425	13,616	14,216	14,611	14,809	15,147	15,450	15,954

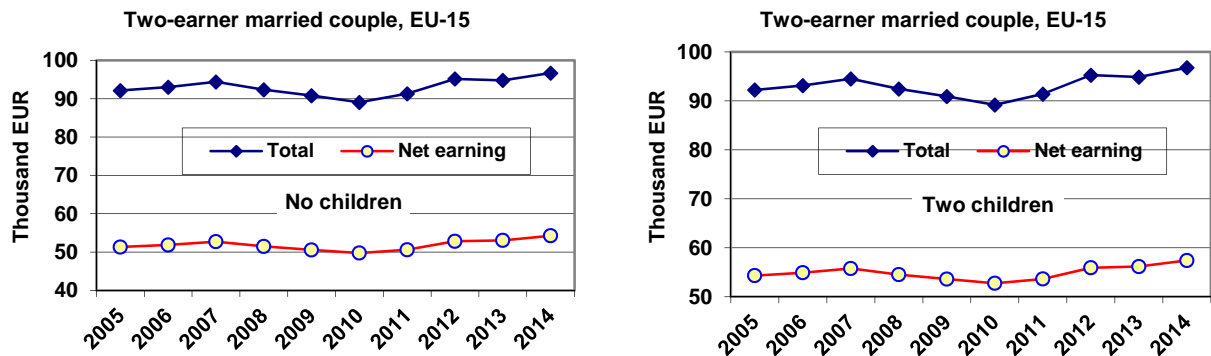


Fig 4: Two-earner married couple, both at 100% of average worker [29]

Wages two-earner married couple with two children and no children they differ little in EU.

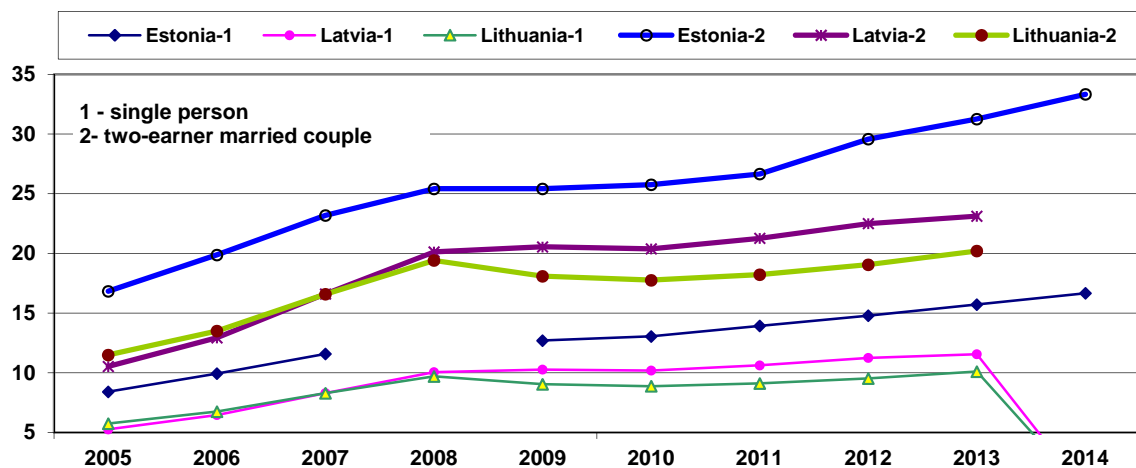


Fig. 5. Baltic States annual total earnings, Euro thousand [29]

Note: 1- Single person, no children. 2- Two-earner married couple, no children

In the period from 2010 to 2013, i.e. within three years, the *two-earner married couple* of Estonia increased 5506 EUR, i.e. by 21.4%. The growth in Latvia and Lithuania in two years was also large. In Slovenia, Slovakia, and Bulgaria there was continuous increase in annual net earnings. The remaining CEE countries experienced a decline in 2009 compared to the year before. The decline was the biggest in Poland. However, its GDP (PPP) continued to grow in 2009 as well. In Slovenia, on the contrary, there was continuous growth of the annual net earnings, their GDP per capita was the highest among post-socialist countries, after the crisis, however their GDP has been continuously declining. The annual net earnings of Slovenia were the highest among post-socialist countries, but still twice lower than the average

of the EU-27 and the USA; 2.3 times lower than the average of the EU-15; 2.9 times lower than in Belgium, Luxembourg, and Sweden; 3.8 times lower than in Norway and Switzerland. Yet, the annual net earnings of Slovenia were four times higher than in Bulgaria. The annual net earnings of Estonia, the highest in the Baltic States, were also 1.4 times lower than in Slovenia. The difference between the two countries with the extreme annual net earnings in the EU, Belgium and Bulgaria, was 11 times.

For comparison, the accrued average monthly nominal wages in Russia in 2012: USD 857.1 (EUR 628), thus, the annual wages in USD 12,285 [30].

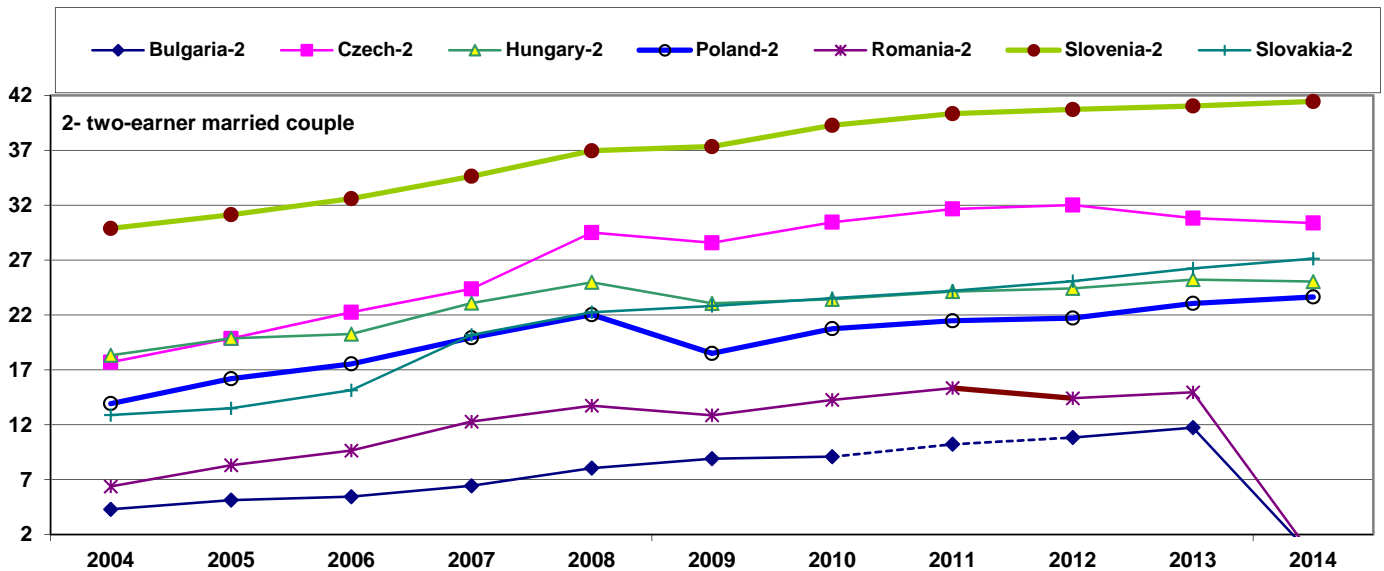


Fig. 6: The CEE-7 states annual total earnings of two-earner married couple, no children, Euro thousand [29]

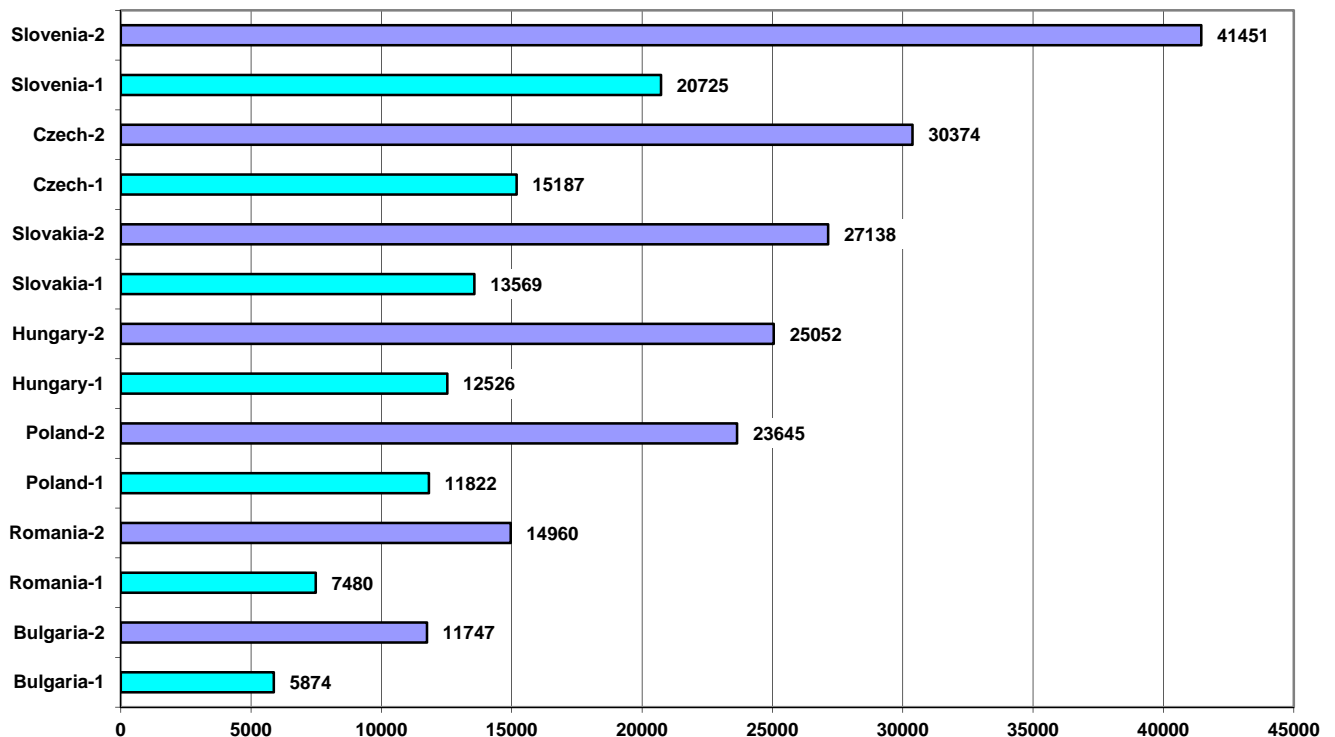


Fig 7: The CEE-7 states annual total earnings, Euro thousand [29]

There is a very high difference between the quality of life in the EU and in the CEE countries. Why? There are objective and subjective reasons. One group of reasons argues that poverty is their own fault. The second, however, argues that poverty has been caused by the exploitation of developing countries and their dependence on developed industrial countries. This, in turn, results in conflicts between rich and poor countries.

In EU-28 increased wages of whole economy in Q1 2015 total 2.4% and Q2 2015 2.1%. Largest increases were in Latvia (7.8%), Romania (7.7%), Bulgaria (6.9%) and Estonia (5.5%); declines were only in Cyprus and Greece.<sup>[31]</sup>

## 5. Monthly wages and salaries of CIS States

**Table 6:** Exchange rates of national currencies established of the CIS countries<sup>[32]</sup>

Per 1	January 2014			January 2015			July 2015		
	RUB	USD	Euro	RUB	USD	Euro	RUB	USD	Euro
Russia, RUB	-	35,24	48,095	-	68,93	78,111	-	58,99	64,65
Ukraine, UAH	0,227	7,99	10,85	0,235	16,16	18,28	0,366	21,61	23,68
Belarus, BYR	273,5	9640	13140	223,5	15400	17440	257,9	15221	16698
Kazakhstan, KZT	4,40	155,54	211,58	2,67	184,45	208,19	3,17	187,45	205,82

**Table 7:** Average Monthly nominal wage in the CIS countries, January<sup>[33]</sup>

	In national currency						USD	Euro
	2008	2010	2011	2012	2013	2014	2014	2014
Russia, RUB	14771	18938	20668	23746	26840	29535	838.11	614.10
Ukraine, UAH	1521	1916	2297	2722	3000	3148	393.99	290.14
Belarus, BYR	756332	999963	1409625	2880585	4368023	5322441	552.12	405.06
Kazakhstan, KZT	54459	66674	77464	92191	99152	104654	672.84	494.63

Between 2008 and 2014 (January), the growth was: Russia 2.00, Ukraine 2.07, Belarus 7.04, and Kazakhstan 1.92 times.<sup>[35]</sup> Rate of capital / countries average monthly nominal wage

was in Russia 1.81, Ukraine 1.52, Belarus 1.35 and Kazakhstan 1.39.<sup>[34]</sup>

**Table 8.** Nominal gross average monthly wages and salaries of CIS States (USD)<sup>[35]</sup>

	2000	2005	2010	2011	2012	2013	2014
Belarus	73,6	215,2	406,6	338,9	439,2	564,2	590
Kazakhstan	101,1	256,3	526,7	614,0	679,1	717,0	672
Russia	79,0	302,5	681,6	796,2	857,1	936,3	859
Ukraine	42,3	157,3	282,2	330,5	378,7	408,5	293

These four countries wages have grown strongly over the last 15 years.

The average salary in January – August 2015 of Ukraine - 3975 UAH, indices for real wages to the same period of the previous year was 76.8%. The highest average salary was in Kiev - 6374 UAH (81.3%) and the lowest - in the Ternopil region of 2805 UAH (74%).<sup>[36]</sup>

Russian wages were in January – August 2015 - 31 870 RUB (real 90.2%), in January – June 2015 of Moscow – 62 334 (real 90.5%), Northwest Russia – 36 817, Siberia – 28 993, Far East Russia – 41 902 RUB.

Russian wages were (Feb 2014) in the 14 region smaller than 390 EUR (under the 19000 RUB), including smaller than 370 EUR (under the 18000 RUB) in the Republic of Kalmykia and Mordovia and Altai Krai. More than 1400 EUR (over 68000 RUB) were in the Chukotka and Yamal-Nenets AO. Average monthly subsistence minimum per capita total population of Russia was in II quarters 2015 10017 RUB.<sup>[37]</sup>

However, this assessment of development is not correct, because the methodology of assessment has been changed a bit several times in the analysed period (2009 to 2013). Changing over to net wages, different tax levels and other factors have to be taken into account. However, it does provide an approximate chance to compare the wages of the CIS countries to the EU wages.

## 6. Conclusions

➤ While developed economies (GDP) increased 1.5 to 2.5 times in the 1980s, the economy of the USSR decreased by a quarter.

- Centralised planned economy was not as effective as free market economy.
- The economic indicators of Central and Eastern Europe countries are very different, both in absolute and in relative terms.
- The highest average gross earnings of CEE countries were in Slovenia. Slovenia and Bulgaria differed by 3.9 and 2.4 times.
- The highest median income in PPS in the CEE countries was in Slovenia. Romania's median income in PPS was 4.0 times lower than Slovenia's and 7.6 times lower than the median income of Luxembourg.
- The quality of life is the highest in Slovenia of the CEE-8 countries and in Estonia of the Baltic States. The level of most of these countries is considerably higher than the wages and other indicators of quality of life in Russia. However, the level of the CEE-8 and the Baltic countries lags far behind the levels of the EU-15 and the USA.
- The wages of these four CIS countries have grown strongly over the last decade.
- The difference between the quality of life in the EU and the CEE countries is very high.
- The wages in all post-socialist countries have increased expeditiously in 1996 - 2013, as a rule, by more than three times. The increase of the wages has also been constant, as a rule, but the crisis of 2009 led to a decline.
- The wages in the CIS countries Russia and Ukraine from 1996 to 2011 increased five times and 2008 – 2014 two times, but in first half 2015 was decline of 10%.

- In EU-28 increased wages of whole economy in Q1 2015 total 2.4% and Q2 2015 2.1%. Largest increases were in Latvia, Romania, Bulgaria and Estonia; declines were in Cyprus and Greece.
- Wages two-earner married couple with two children and no children they differ little in EU.
- Thus, in order to get a more accurate overview of what were the lessons learnt by countries as a result of the economic crisis, other key indicators in their interconnection should be observed as well. A more detailed analysis of different types of key indicators would also provide a more accurate picture.

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