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ANALYSIS OF TRENDS AND PERSPECTIVES IN WAGE SETTING MECHANISMS AND POLICIES AND OPTIONS FOR THEIR APPLICATION IN DEVELOPING SUSTAINABLE WAGE POLICIES IN REPUBLIKA SRPSKA

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SUMMARY

The objective of this document is to provide partners in social dialogue in Republika Srpska with useful information and an analysis of a range of subjects related to the dialogue on wages and their future trends.

Minimum wage

When referring to defining a minimum wage, International Labour Organization (ILO) emphasizes the importance of achieving the balance between social and economic needs. This means that it is necessary to take into consideration both, the needs of the workers and their families but also the requirements of the economic development and of the high employment level. ILO also recommends adjusting the minimum wage over time.

Practices of defining a minimum wage differ among the EU Member States, as some of them do not have a legally defined minimum wage on the level of entire economy. On the other hand, some countries use indexation mechanisms - linking minimum wage trends with different indicators. ILO recommends defining minimum wages based on fact, irrespective of the indexation – **minimum wage levels should be defined based on full consultations and the direct participation of social partners.**

Thus, general level of prices and costs of living are the elements with the highest impact on minimum wage adjustments, with the consumer price index being the most frequently used indicator. Other elements which are often taken into consideration to achieve a balance with economic needs are **labor productivity, unemployment rate and number of employed persons to be affected by minimum wage increase**.

The gross minimum wage in RS in 2016 amounted to 621.9 BAM, of which 36.5% is deducted for contributions and income taxes. This "tax wedge" included in the minimum wage (representing the difference between gross and net wage) is high when compared to many EU Member States. **Thus, minimum wage received by the worker amounted to 395 BAM net**. If minimum wage levels in the region are considered, since they are not that different from the one in Republika Srpska, as well as extremely low wages in domestic processing industry (52% of employees receiving a wage of 500 BAM or less), it can be concluded that it is not possible to agree on any significant increase of minimum wage through a single adjustment without addressing matters such as a general wage level and other important elements, e.g. productivity. The competitiveness and the profitability of the economy of Republika Srpska heavily rely on low wages and each significant increase of wages would have impact on cost structure and allocation of income. Accordingly, **the dialogue on minimum wage needs to be simultaneous with the dialogue on general wage level and wages in individual sectors,**

as well as the dialogue on reforms which would contribute to the growth of the productivity of the local economy.

Wages in processing industry in Republika Srpska

The average net wage in processing industry in Republika Srpska in 2016 amounted to 626 BAM while at the same time more than 50% of employees were registered to receive a net wage lower than 500 BAM. In the period 2010 - 2016, a certain level of correlation existed between the gross wage growth on one side and increased productivity and inflation on the other side. Gross wages even grew a little bit faster. However, due to the fact that the increase of wages started from the very low level, wages in processing industry still remain quite low.

When compared to the developed countries, BiH processing industry allocates relatively low share of the newly-created value added to the wages of the employees. Even though there is a significant difference in value added per employee between BiH and the developed countries, such differences are still lower than the difference in wages.

Prices of processing industry products compared to other countries

Prices of local processing industry producers in period January 2013- April 2017 grew significantly faster than comparable prices in Germany, Italy, Slovenia and on the EU level. This finding does not support the hypothesis that prices of products produced by local processing industry producers grow more slowly than those of foreign producers, which, in turn, worsens the trading (exchange) conditions to the detriment of local producers, at least not on the level of entire processing industry. However, this finding also does not negate the possibility of unfavorable relation of prices, harming producers from Republika Srpska, which could have potentially appeared in previous period. To determine whether such imbalances exists, it is necessary to compare nominal price values on the level of individual sectors, or even companies.

Wages in public sector

In September 2017, the average gross wage in public administration of Republika Srpska was 85% higher than the average gross wage in processing industry. Previous analyses in this field suggest that such a large gap between wages in the public and private sector, which is significantly larger than in other countries of the region, hinders the development of sound negotiations between employers and trade unions in the private sector and discourages entrepreneurship development.

Emigration of workforce

Population drain from Republika Srpska increased in previous period, which contributed to the decrease of actual unemployment rate from 27.3% in 2013 to 24.8% in 2016. Like in other countries, the **decrease of unemployment rate in Republika Srpska resulted in pressure to increase the wages**.

Convergence of wages and productivity between EU Member States

A gradual convergence of wages across the EU Member States is evident, which, in turn, reflects a parallel convergence process in productivity levels - undeveloped countries are "catching up" with more developed countries. The European Commission believes that the last economic crisis temporarily stopped this process; however **structural reforms continued to be implemented and have lately been focused on strengthening social assistance instruments and decrease of taxation of work.**

Wages based on purchasing power

If the nominal wages in BiH and other countries are corrected using the difference in prices in these countries, huge differences between wages are somewhat alleviated. E.g., the average wage in Germany was 5.5 times higher than the average wage in Republika Srpska in 2015. If those wages are corrected using the purchasing power in these countries, then the ratio is reduced to 2.6. The same ratio would be reduced to 1.5 if both wages were fully spent on products and services from the category "Housing, water, power, gas and other fuels" due to big differences in prices in this category of good and services.

The information that a person in BiH earning the wage of 1,931 BAM can purchase roughly the same amount of goods and services as the person earning the average wage in the EU 28, and that the person earning 2,213 BAM can purchase roughly the same amount of goods and services as someone earning the average wage in Germany can give an impression of the purchasing power of an average salary in other countries.

1. INTRODUCTION

This document was prepared with the technical assistance of project “Support to Social Partners in Social Dialogue“ and it addresses a range of subjects related to current situation and perspectives of wage trends in Republika Srpska. Apart from being a basic source of income for workers, wages also represent one of most influential elements of the foreign trade competitiveness of local producers. In the light of negative demographic trends, increased emigration and gradual decrease of the unemployment rate in Republika Srpska, it can be stated that these subjects have gained importance and thus need to be discussed. Consequently, the aim of this document is to provide a wider contextual and informational background for social partners in Republika Srpska, which might contribute to an easier reconciliation of their respective attitudes on the above-mentioned issues.

After the introduction, the document discusses minimum wage and gives an overview of the views of the International Labour Organization and the EU institutions on the basic criteria for minimum wage setting. Minimum wage levels and trends in Federation of BiH were analyzed in comparison to Republika Srpska and major foreign trade partners. An overview of various practices applied by EU Member States in defining minimum wage is also provided, including models of an automatic minimum wage adjustment using mathematical formulas. Although the author initially intended to evaluate the impact of application of specific automatic model to wages in Republika Srpska (in terms of a number of employed persons affected by the application of such a model and total increase or decrease of salary deductions and/contributions), it proved impossible to do so, due to the lack of detailed information on the distribution of workers as per value of wages in Republika Srpska. The analysis also tackles other issues related to minimum wage setting and policies, such as taxation of work.

The analysis deals with wages in processing industry in the context of comparable wages in the region and EU, as well as basic related elements of impact, such as productivity and inflation. The analysis also tried to test the hypothesis that prices of products of local industrial producers “do not follow“ the growth, i.e. that these increase more slowly than those of foreign producers, which in turn worsens trade (exchange) conditions to the detriment of local producers.

The next chapter treats impact of wages in public sector of RS to the setting of wages in the private sector, and large disparity between public and private sector wages. The mechanisms and impacts of workforce emigration from BiH and convergence of wages and productivity on EU level are also included in the analysis, and finally, average wage in BiH was compared to average wages in other countries based on their actual purchasing power.

2. MINIMUM WAGE

2.1. VIEWS OF INTERNATIONAL LABOUR ORGANIZATION AND EU INSTITUTIONS

The International Labour Organization (ILO) is a the only tripartite United Nations agency which has been bringing together governments, employers and workers of 187 member states, since 1919, to set labor standards, develop policies and devise programs promoting decent work for all women and men.[1] Having such mandate, ILO uses its instruments (such as conventions and recommendations) to address the matter of defining minimum wages by providing general framework, principles and globally applicable recommendations.

ILO defines the minimum wage as the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract.[2]

In 1970, ILO adopted the Minimum Wage Fixing Convention, which states as follows:

"*The elements to be taken into consideration in determining the level of minimum wages shall, so far as possible and appropriate in relation to national practice and conditions, include:*
(a) ***the needs of workers and their families****, taking into account the general level of wages in the country, the cost of living, social security benefits, and the relative living standards of other social groups;*
(b) ***economic factors****, including the requirements of economic development, levels of productivity and the desirability of attaining and maintaining a high level of employment.*[3]

Although the listed elements are quite general, it is evident that **emphasis is placed on achieving balance between social and economic needs in a particular country**. This approach combines social and economic factors to determine a level which is of use to both, the workers and the society, without producing any adverse impacts. A balanced approach is emphasized, since minimum wage is a redistributive tool which has both, its costs and benefits. If set too low, minimum wages will have little effect in protecting workers and their families against unduly low pay or working poverty. If set too high, minimum wages will be poorly complied with and/or have adverse employment effects.[4]

ILO Recommendation on Minimum Wage Setting no. 135 from 1973 additionally states:

[1] Source: http://www.ilo.org/global/about-the-ilo/lang--en/index.htm.
[2] Source: http://www.ilo.org/global/topics/wages/minimum-wages/definition/WCMS_439072/lang--en/index.htm.
[3] C131 - Minimum Wage Fixing Convention, 1970 (No. 131), ILO.
[4] International Labour Organization, Minimum Wage Policy Guide: Chapter 5 – Setting and adjusting minimum wage levels.

*„11. **Minimum wage rates should be adjusted from time to time** to take account of changes in the cost of living and other economic conditions.*
*12. To this end a review might be carried out of minimum wage rates **in relation to the cost of living and other economic conditions** either at regular intervals or whenever such a review is considered appropriate in the light of variations in a cost-of-living index. "*[5]

Although the minimum wage setting is in jurisdiction of individual EU Member States, European institutions also deal with this matter, within the domain of their jurisdiction. After recent economic crisis in Europe, wages became one of most important matters of the European economic policy. Through adoption of the so-called "Euro Plus Pact" in March 2011, wages were officially declared to be the main instrument for adjusting economic imbalance and national competitiveness in Europe. According to the European Commission "reforms of labor markets and in particular wage-setting mechanisms need to ensure efficient adjustment of labor costs in order to facilitate absorption of macroeconomic imbalances and reduce unemployment ". The same view has been adopted by the International Monetary Fund (IMF), which demands giving priority to the labor markets' structural reforms as a major precondition for economic recovery in Europe. Policies aiming to remedy consequences of economic crises were mainly focused on restraining wage growth or wage cuts to support economic recovery. Minimum wages in many EU Member States were accordingly set quite low, which doesn't prevent low wages in some sectors.[6]

During 1990s, the Council of Europe adopted a threshold for "fair remuneration" which amounts to minimally 60% of average net wage in a country. The concept of remuneration refers to remuneration – either monetary or in kind – paid by an employer to a worker for time worked or work done.[7] The Council of Europe evaluates whether the right to a fair remuneration is respected in a country which has ratified this provision of the European Social Charter by applying this 60% threshold. According to the latest 2010 evaluation, only 5 European Member States fulfilled this criterion: France, Malta, Denmark, Norway and Sweden.[8]

In some countries (for example Spain, Portugal, Poland and Romania) agreements have been reached to significantly increase minimum wage in the second half of the 2000s. In general, the aim of these agreements was for the minimum wage to amount to at least 50% of average wage. The threshold determined by the European Social Charter was even explicitly mentioned in Spain. However, during the recent economic crisis, most of these countries suspended their minimum wage adjustment policies. Slovenia was the sole exception, where, in 2010, the national minimum wage was increased by more than 30% in order to increase it above the subsistence wage. The European Parliament returned to this matter in 2007 when it became evident that in many EU Member States "the minimum wage is set very low or below subsistence level". In 2008, the European Parliament called

[5] Source:http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312280:NO.
[6] Schulten, T. (2012). European minimum wage policy: A concept for wage-led growth and fair wages in Europe, International Journal for Labour Research.
[7] Council of Europe (2008), Digest of the Case Law of the European Committee of Social Rights.
[8] Schulten, T. (2012). European minimum wage policy: A concept for wage-led growth and fair wages in Europe, International Journal for Labour Research.

for “an agreement on minimum wage...to provide a remuneration amounting to 60% of relevant... average wage“. In 2010, the Parliament concluded that “each worker should have a decent living wage“ and stated that “**living wage must always be above the poverty threshold**.”[9] The poverty threshold for a person or a household represents minimum income needed for such person or household not to live in poverty. For many persons and households, wages represent the most significant source of income (other sources of income might be social help, transfers from abroad, benefits, income from capital, income from informal economic activities etc.). According to information obtained by the Individual Consumption Survey in BiH for 2015, poverty threshold amounted to 389.26 BAM.[10] This amount represents a relative line of poverty defined to amount to 60% of median equalized individual consumption. It is interesting to note that the poverty threshold, according to this calculation method, was reduced by 27.14 BAM in comparison to 2011.[11]

In 2012, the European Trade Union Confederation (ETUC) came forward with a proposal whereby in all European countries the level of minimum wage should be at least 50 % of the national average and 60 % of the national median wage. Implementation of such European goal implied a rather substantial increase of national minimum wage levels for many European countries. According to Schulten (2012), such a EU level wage policy could have positive social and economic effects:

- it would compress the national wage structures from below and would lead to a more egalitarian distribution of income between different groups of workers (including the reduction of the gender pay gap)
- it would also contribute to strengthen the overall wage developments in order to stabilize or even increase the wage share
- it would help to fight poverty and would disburden the state from paying social welfare benefits
- it would help to stabilize or increase private demand, since workers with low income will put the largest part of their additional income into consumption
- it would support the function of wages as a nominal anchor for the price level in order to prevent deflation.[12]

Decisions to introduce a minimum wage or to raise the level of minimum pay are usually prompted by concerns about income inequality or fighting poverty. European employers, organized in the European cross sectoral employers’ confederation BUSINESSEUROPE[13] say that these are legitimate concerns, but also argue that the question is which mechanisms or policies are the most appropriate to address these concerns. They also argue that, for example, if minimum wages are set at a level which is too high, they will negatively impact on employers’ capacity to hire lower skilled workers.

[9] Ibid.
[10] Agency for Statistics of BiH (2017) Individual Consumption Survey in BiH for 2015
[11] More information of different methodologies and calculations of poverty threshold in BiH can be found in: Obradović, N. Đukić, O (2016) Social Transfers in BiH- How do Poor Citizens Benefit? (*Socijalni transferi u BiH- šta siromašni građani imaju od njih?*)
[12] Schulten, T. (2012). European minimum wage policy: A concept for wage-led growth and fair wages in Europe, International Journal for Labour Research.
[13] https://www.businesseurope.eu/sites/buseur/files/media/imported/2008-02098-E.pdf

According to the OECD, social contributions and other payroll taxes add, on average, around 18% to the cost of employing minimum-wage workers. Consequently, in their opinion, setting minimum wages at levels which are too high, or which are not in line with productivity reduces the employment chances of less skilled workers and of the unemployed.

Employers also believe that a better way to make work pay for the low-skilled and/or unemployed is through changes in the tax and benefit system. For example, a considerable number of countries charge similar rates for minimum-wage labor and higher-earning employees, thereby substantially reducing the net take-home pay of minimum wage workers. Easing the tax burden on low or minimum incomes should therefore take precedence over attempts to raise the level of the minimum wage.

2.2. THE LARGEST TRADE PARTNERS OF REPUBLIKA SRPSKA

When wage levels and other factors determining competitiveness level in comparison to other countries are analyzed, comparisons with countries with which BiH and RS have the largest trade volume trade become, of course, the most important ones. Therefore, the following chapters provide various comparisons, focusing in particular on countries which are the largest trade partners of RS and BiH. However, comparisons based on the data about a number of other countries, due to their competitive impact on target markets, but also to obtain a wider perspective of issues analyzed.

According to data for 2016 obtained from RS Institute of Statistics (Table 1), Serbia is most important trade partner of Republika Srpska with 15.8% share in total trade. Italy and Germany follow (14.3% and 9%, respectively).

The importance of trade of RS with Federation of BiH within BiH should not be forgotten. However, there are no official data on the volume of this trade.

Table 1 Countries with largest share in international trade with Republika Srpska, 2016 (in thousand BAM)

Country	I-XII 2016						
	Trade volume	Structure	Export	Structure	Import	Structure	Coverage of export with import, %
TOTAL	7296046	100.0	2869101	100.0	4426945	100.0	64.8
Serbia	1162936	15.9	358869	12.5	804067	18.2	44.6
Italy	1044369	14.3	499128	17.4	545241	12.3	91.5
Germany	654028	9.0	301350	10.5	352678	8.0	85.4
Russia	604113	8.3	26823	0.9	577290	13.0	4.6
Slovenia	520542	7.1	279864	9.8	240678	5.4	116.3
Croatia	460478	6.3	253976	8.9	206502	4.7	123.0
Austria	347122	4.8	219069	7.6	128053	2.9	171.1
China	279705	3.8	9719	0.3	269986	6.1	3.6
Hungary	183956	2.5	70470	2.5	113486	2.6	62.1
France	182278	2.5	77583	2.7	104695	2.4	74.1
Netherlands	157694	2.2	85157	3.0	72537	1.6	117.4
Turkey	149635	2.1	64666	2.3	84969	1.9	76.1
Slovakia	121708	1.7	81227	2.8	40481	0.9	200.7
Bulgaria	115961	1.6	54625	1.9	61336	1.4	89.1
Poland	114051	1.6	27988	1.0	86063	1.9	32.5
Czech Republic	95274	1.3	37808	1.3	57466	1.3	65.8
FYR Macedonia	94903	1.3	37473	1.3	57430	1.3	65.2
Switzerland	94347	1.3	74703	2.6	19644	0.4	380.3
Montenegro	88737	1.2	70407	2.5	18330	0.4	384.1
Romania	73259	1.0	33316	1.2	39944	0.9	83.4
Other countries	750951	10.3	204882	7.1	546069	12.3	37.5

Source: RS Institute of Statistics

Table 2 Export and import in/from economic groups of countries (in thousand BAM)

	Export			Import			Structure	
	I-XII 2015	I-XII 2016	Index I-XII 2016 / I-XII 2015	I-XII 2015	I-XII 2016	Index I-XII 2016 / I-XII 2015	Export I-XII 2016	Import I-XII 2016
TOTAL	2613924	2869101	109.8	4369179	4426945	101.3	100.0	100.0
EU -28	1897196	2094229	110.4	2115445	2237194	105.8	73.0	50.5
EFTA	65314	76543	117.2	21241	22914	107.9	2.7	0.5
Other developed countries	53185	87943	165.4	175250	185118	105.6	3.1	4.2
CEFTA	509689	521492	102.3	839876	888280	105.8	18.2	20.1
Developing countries	69271	74924	108.2	1217367	1092154	89.7	2.6	24.7
Unallocated	19268	13970	72.5	0	1284	[1)]	0.5	0.0

Source: RS Institute of Statistics

2.3. MINIMUM WAGE LEVEL AND TRENDS IN OTHER COUNTRIES

Defining minimum wage level in the EU is within jurisdiction of individual Member States, which define it by laws or other acts. Only 6 out of 28 EU Member States do not have a statutory minimum wage on the level of entire state. In such countries, minimum wages are mainly determined on sectoral level, by sectoral collective agreements. Italy, which is an important trade partner of RS, belongs to this group of countries.

While new Member States generally have lower minimum wages that EU15 countries, convergence process is clear when we look at both nominal and real amounts. However, significant differences still exist: minimum wage in Bulgaria is still approximately 8.5% lower than minimum wage in Luxemburg. Nevertheless, from 2010 to 2017, Bulgaria and Romania had a highest increase of minimum wage (approximately 80% in both countries).[14]

Table 3 Gross minimum wages in EU MS, Western Balkan countries, RS and FBiH in 2017 (in EUR)

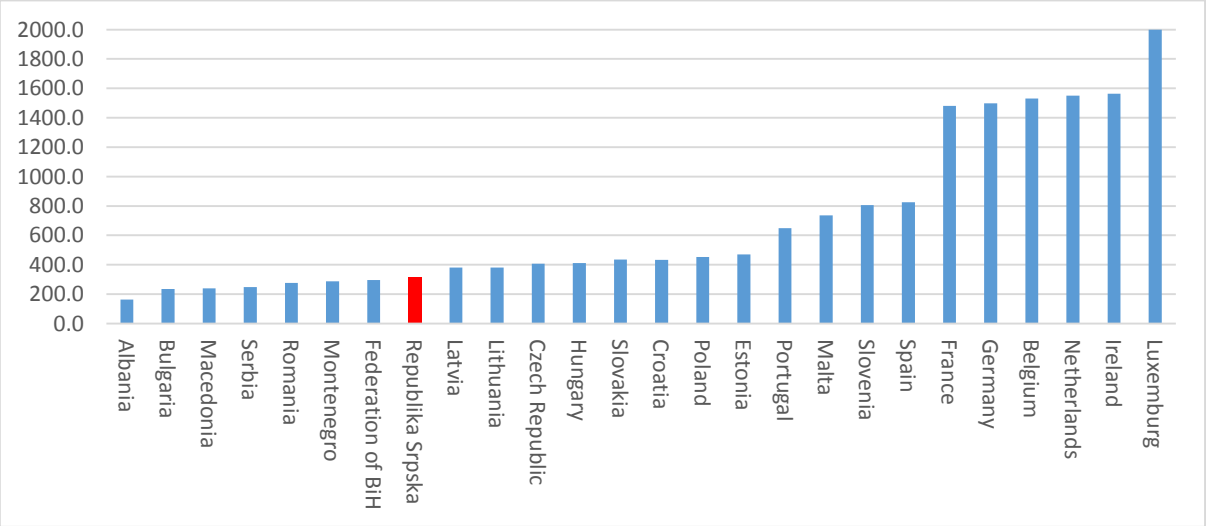
Albania	*162.7*
Bulgaria	235.2
Macedonia	239.7
Serbia	247.9
Romania	275.4
Federation of BiH	296.7
Republika Srpska	318.0
Montenegro	288.1
Latvia	380.0
Lithuania	380.0
Czech Republic	407.1
Hungary	411.5
Slovakia	435.0
Croatia	433.4
Poland	453.5
Estonia	470.0
Portugal	649.8
Greece	683.8
Malta	735.6
Slovenia	805.0
Spain	825.7
France	1,480.3
Germany	1,498.0
Belgium	1,531.9
Netherlands	1,551.6
Ireland	1,563.3
Luxembourg	1,998.6

Source: Eurostat and general collective agreements in RS and FBiH

[14] Fric, K. (2017). Statutory minimum wages in the EU in 2017

Magnitude of current discrepancy between minimum wages across countries can best be seen if these values are presented in a graph:

Figure 1 Gross minimum wages in EU countries, Western Balkan countries, RS and FBiH in 2017 (in EUR)

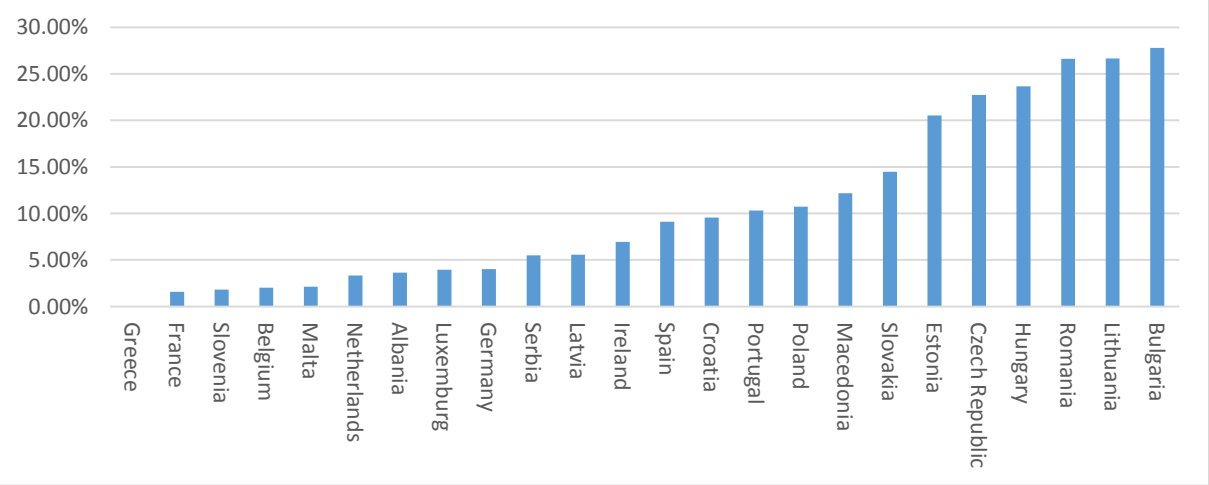


Source: Eurostat and general collective agreements in RS and FBiH

The EU Member States experienced a more accelerated growth of minimum wages during the last year (first half of 2016 and first half of 2017). Out of 22 MSs with a minimum wage, 15 applied greater increases compared to the period 2015– 2016.

Between the beginning of 2016 and the beginning of 2017, the new Member States generally experienced a more pronounced statutory minimum wages' growth than most of other EU Member States. Bulgaria, Lithuania and Romania recorded the highest increases in this period – 28%, 27% and 227% respectively, which can be seen in graph below.

Figure 2 Annual increase of minimum wage in EU countries, first half of 2016- first half of 2017 (in %)



Source: Eurostat and author's calculations

When minimum wages in EU countries are compared to the average wages, according to Eurostat, minimum wages varied from 34% of average wage in Spain to 51% of average wage in Slovenia. It is necessary to keep in mind that extremely high wages of best paid employees in developed European countries increase the level of average wage, reducing thereby the minimum wage vs. average wage ratio.[15]

For this reason, this indicator is more favorable in undeveloped EU countries, or acceding countries, than when absolute minimum wages are compared across the countries. However, if one undeveloped country is characterized by extremely low wages of majority of employees, potentially high relation between minimum wage and average wage does not mean that such minimum wage can meet basic social needs of workers and their families.

[15] For this reason, median wage is used as an alternative measure of a relative relation instead of an average wage. Median wage is positioned at the middle of distribution of workers per wage i.e. half of the employees earn less than the median and half earn more. Share of the minimum wage in the median wage is significantly higher than that in average wage and amounts to approximately 60% in Slovenia and France.

Table 4 Gross minimum wage in relation to average wage per countries, 2016 (in %)

Spain	*34.1%*
Czech Republic	34.6%
Estonia	37.4%
Slovakia	37.9%
Montenegro	38.4%
Croatia	38.6%
Romania	40.4%
Germany	41.1%
Bulgaria	41.2%
Ireland	42.3%
Netherlands	42.7%
Republika Srpska	43.2%
Federation of BiH	44.0%
Malta	44.2%
Latvia	44.4%
Belgium	44.9%
Hungary	45.3%
Poland	45.4%
Serbia	46.3%
Luxembourg	46.4%
Lithuania	46.6%
Portugal	46.6%
Albania	46.9%
France	47.6%
Greece	50.1%
Slovenia	50.8%

Source: Eurostat, general collective agreements in RS and FBiH, average wage reports of institutes of statistics of non-EU countries, reports of central banks of non-EU countries on exchange rates, author's calculations
Note: Eurostat indicator -Monthly minimum wage as a proportion of average monthly earnings was used for EU countries

According to Schulten even in the EU Member States, minimum wages set in this manner enable existence of so called “poverty wages“, since poverty threshold is generally defined as 60% of median income. A „wage-led economic growth“ could be an alternative to this wage reduction or significant wage limitation policy applied by a specific number of EU Member States as a response to economic crisis (Schulten, 2012).

Referring to previous comparison of minimum wages, it is very important to emphasize that the comparison is based on gross wages i.e. wages which incorporate income tax and employee benefits’ contributions. Share of such obligations, which we call the “tax wedge“ is directly determining net wage levels i.e. the amount paid to the worker. **The tax wedge for the lowest gross wage in RS**

amounts to 36.5%[16]. This tax wedge is quite high since many EU countries have a lower tax wedge rates for low income. For example, according to *Eurostat* data, tax wedge for a person being paid a wage in amount of 67% of average wage (which is above minimum wage), amounts to 19% in Switzerland, 21.2% in Ireland and 30.6% in the Netherlands and 30.6% on Iceland.[17]

2.4. WHAT TO RELY ON WHEN SETTING A MINIMUM WAGE?

ILO recommends a **balanced approach** to minimum wage setting, which is **based on evidence** and considers needs of the workers and their families on one side, and economic factors on the other.

An evidence - based approach implies that it is necessary to set **clear criteria for dialogue on minimum wage and use statistical indicators as arguments in the dialogue**. The most frequently used indicators for this purpose are: consumer price index, average wage, GDP growth (or GDP per capita) and unemployment rate.

In order to maintain its relevance, minimum wage must be adjusted from time to time. Governments and social partners can in principle agree to revise the minimum wage whenever they consider it necessary. However, in the absence of fixed periodicity, both workers and employers will be affected by some uncertainty.

Increases in the general level of prices and the cost of living are the most influential elements considered in minimum wage adjustments. This is because inflation erodes the real value of the minimum wages over time. The Consumer Price Index (CPI) is the most frequently considered indicator when it comes to automatic minimum wage adjustments.

However, such “indexation” mechanisms have been questioned recently as they were considered to introduce “inflationary inertia” under some circumstances. In other words, the reproduction of past inflation in wages and other prices can become an obstacle for reducing the current inflation rate. According to ILO, it is necessary to consider economic factors when setting a minimum wage. If the minimum wage is set too high or increased too much, this may have unexpectedly large impacts on the labor costs that employers must pay. This, in turn, could trigger price inflation, hurt exports, and reduce the level of employment. Wages that are too low, by contrast, constrain domestic household consumption.[18]

In this context, it is necessary to monitor labor productivity indicators which provide information on market value of what is produced by an average worker in a country. **Taking into account labor productivity in regular adjustments also ensures that workers receive a share of the “fruits of**

[16] Gross minimum wage was 621.9 KM, net minimum wage was 395 BAM, and tax wedge is the difference between these two values.
[17] Eurostat data on tax wedge on labour costs for low wage earners for 2016 were used (Tax rate on low wage earners: Tax wedge on labour costs)
[18] ILO. Minimum Wage Policy Guide: Chapter 5 – Setting and adjusting minimum wage levels.

progress". Average labor productivity in a country is usually measured as GDP per worker, or GDP per hour worked. In practice, many countries use some proxy indicators, like GDP growth or GDP per capita growth in their periodic adjustments. This is where **importance of reliable statistical information** becomes evident, as well as regular updating and publishing of such information, which can contribute to the development of evidence-based social dialogue.

Another statistical indicator to be considered is the **unemployment rate which will probably be affected by increase of current minimum wage**. If the minimum wage is set too high, this may have unexpectedly large impacts on average labor costs and the total wage that employers must pay.[19]

[19] ILO. Minimum Wage Policy Guide: Chapter 5 – Setting and adjusting minimum wage levels.

Examples of minimum wage indexation

In **Brazil**, the law has established that minimum wage adjustment is determined by a formula that considers inflation and GDP. The formula is: *Δ MW t = Δ CPI t-1 + Δ GDP t-2* (MW – minimum wage, CPI – consumer price index, GDP – gross domestic product).

In **France**, annual minimum wage adjustments are linked to inflation trends as well as to the increase in the purchasing power of the employees. The minimum wage adjustment takes place every January. It incorporates the change in the CPI (consumer price index) over 12 months (November t-2 to November t-1). The annual revision of the minimum wage also incorporates half the annual increase in the hourly basic rate of blue collar wages (from September t-2 to September t-1), resulting from a specific survey carried out quarterly by the Ministry of Labour.

The formula is: *Δ MWt = Δ CPI Nov t-2/Nov t-1 + 0.50 * Δ Blue collar hourly wage Sep t-2/Sep t-1*.

France's minimum wage also has an automatic guarantee concerning the evolution of prices. This adjusts the minimum wage every time the price index increases by 2 per cent or more since the last adjustment. In addition to this mathematical determination of minimum wage adjustments, France also has a discretionary component that can introduce an additional percentage to the final increase. Since 2009 a commission of independent experts recommends if there is space for an additional increase (coup de pouce), taking into account the economic context.

The **Netherlands** adjusts its minimum wage twice a year (on 1 January and 1 July) in line with changes in the weighted average of collectively agreed wages. In the Netherlands minimum wages also determine minimum social security benefits, raising concerns related to the tax burden. For this reason, in 1993 a condition for minimum wage uprates established that if the "inactives to actives ratio" exceeds a threshold of 82.6 per cent there would be no increase.

2.5. OTHER FACTORS WHICH HAVE IMPACT ON SETTING MINIMUM WAGE IN REPUBLIKA SRPSKA

The way the minimum wage is set in RS is determined by Republika Srpska Labor Code.[20] According to the Labor Code, the minimum wage in Republika Srpska is determined by the RS Government upon proposal of Economic-Social Council of Republika Srpska in the last quarter of the current year for following year. It is evident here that the Labor Code has set an obligation of periodic minimum wage level setting, which is in accordance with ILO recommendations and practices of many countries. However, the Labor Code has not defined any criteria that the Economic-Social Council could rely on when defining the proposal. The Labor Code furthermore prescribes that, if the Economic-Social Council does not define its respective proposal, the Government of Republika Srpska has to reach a decision on minimum wage, having in mind wage level trends, increase of production and in living standards, which provides some but still quite general criteria for this step.

[20] Republika Srpska Labor Code, Official Gazette of RS, no. 01/16.

If the previously presented data are considered, the nominal gross minimum wage in RS amounting to 318 EUR (or 202 EUR/395 BAM net) represents one of the lowest minimum wages in the region. In comparison, the minimum net wage in FBiH i.e. 2.31 BAM/h amounts to 400.4 BAM monthly, while the employees also have a right to a meal or a meal allowance in amount of 80 BAM per month.[21]

If distribution of employees per pay grades is considered, based on the information provided by RS Tax Administration for September 2016, it is evident that the largest pay group is comprised of workers receiving wages in the range 351- 500 BAM, whereby the minimum wage falls within this range. [22] **Among those workers who work 160-200 paid working hours in a month, the total number of workers earning less than 500 BAM was 69.227 or 34.2% of total number**. It can thus be concluded that a significant number of workers receives a wage falling within a pay range which also includes minimum wage (at best, such workers receive 130 BAM more than minimum wage). This should be considered when making decisions on minimum wage levels which have an impact on labor costs paid by the employers, who have to adjust the wages of specific number of workers after the minimum wage is increased.

Also, it is necessary to consider the assumption that particular number of employees is receiving additional payment "in the envelope" (workers registered to a low wage who receive remaining part of the wage in cash to avoid tax and benefits' contributions' expenses), as it has been stated in the previous research.[23] If such unregistered payments would become registered, distribution of the workers per pay grades would probably look differently and 351-500 BAM pay grade would probably count less members.

[21] Minimum wage in FBiH was calculated based on average number of working days per month in 2017, and meal allowance was calculated based on average wage in August 2017 and total number of working days reduced by an assumed number of days of public holidays and annual leave.
[22] In 2016, minimum wage was 370 BAM. Employees receiving a lower wage were registered to work for a lower number of working hours (less than 40 hours per week) or were on a sick leave during that period.
[23] See for example, Đukić, O. Martić, M. Kovač, R. (2016) Taxation of labour and informal economy (*Oporezivanje rada i neformalna ekonomija*).

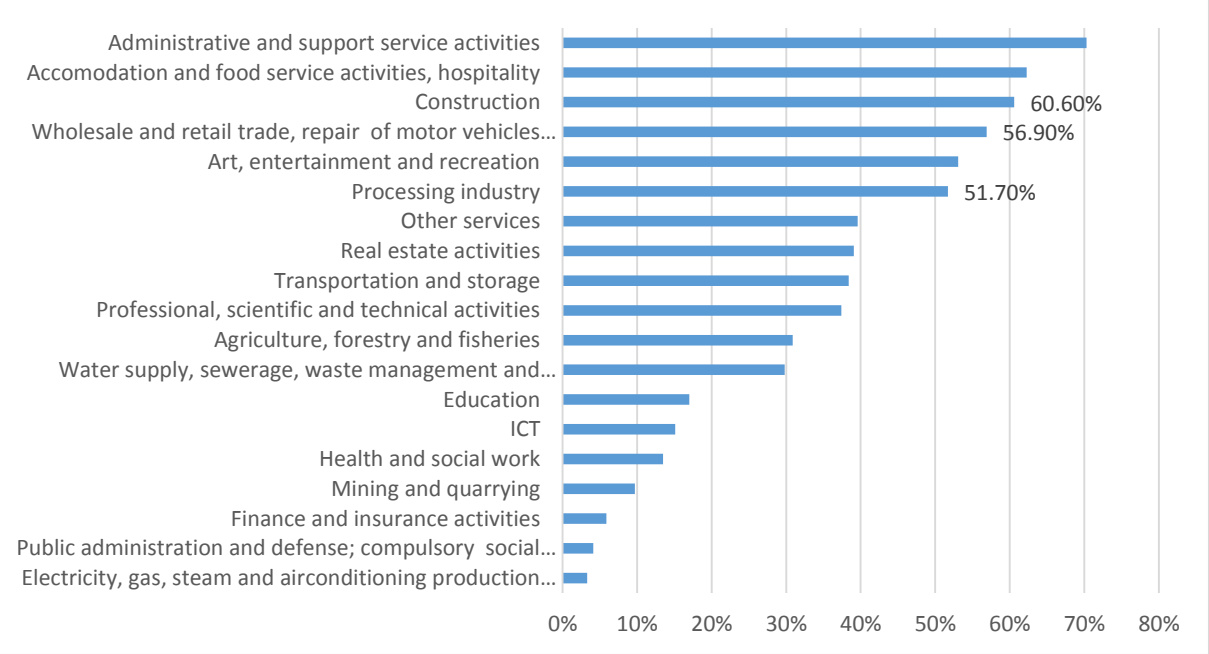
Table 5 Number of workers paid in business entities, according to classification of activities and net wage level, September 2016

	CA classification	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Total (2+3+17)	7684	5299	44307	7815	4744	10271	31323	9650	2541	4982	5471	461	4972	2723	24165	21048	17001	3359	2201
2	Up to 160 paid work hours	81	34	733	56	28	206	690	107	85	67	346	58	207	89	101	3706	261	75	72
3	160 - 200 paid work hours (4-16)	7603	5237	43440	7544	4690	10065	30540	9539	2456	4906	5124	402	4763	2634	24024	17342	16701	3284	2129
4	up to 250 BAM	19	30	406	16	17	79	208	54	16	2	30	7	34	32	20	113	75	37	29
5	251-350 BAM	46	35	1021	25	32	159	492	71	121	14	20	5	76	33	38	147	93	41	25
6	351-500 BAM	2285	444	21031	207	1348	5865	16676	3540	1393	724	252	145	1669	1786	925	2682	2081	1667	789
7	501-650 BAM	1554	483	9692	721	1346	2052	5840	2373	488	496	375	96	913	323	1644	1054	1650	547	444
8	651-800 BAM	1244	806	4471	1401	914	961	3147	1248	230	563	733	63	617	146	3806	1292	2720	332	230
9	801-950 BAM	1121	791	2808	1412	453	475	1488	1260	95	412	780	30	364	64	4256	1697	3938	183	165
10	951-1100 BAM	590	747	1658	1049	211	197	954	391	59	407	596	13	316	42	4209	7083	1813	206	98
11	1101-1400 BAM	500	1180	1205	1280	201	116	844	320	32	1072	776	20	317	126	3885	2275	1491	184	146
12	1401-1700 BAM	188	425	534	751	77	74	473	215	10	440	600	6	219	59	2871	349	814	57	84
13	1701-2000 BAM	27	134	227	327	38	23	207	42	5	329	377	6	79	13	882	277	789	12	53
14	2001-2500 BAM	14	92	166	218	30	47	112	12	5	319	315	6	73	8	613	231	901	10	36
15	2501-3000 BAM	11	36	85	109	17	8	44	5	1	66	135	5	52	1	539	135	268	7	18
16	over 3000 BAM	4	34	136	28	6	9	55	8	1	62	135	0	34	1	336	7	68	1	12
17	over 200 paid working hours	0	28	134	215	26	0	93	4	0	9	1	1	2	0	40	0	39	0	0

Source: RS Tax Administration

The highest number of workers with a wage lover than 500 BAM is employed in processing industry (22.458), followed by trade (17.376) and construction (6.103). These sectors are at the top of the pyramid when the share of jobs with wages lower than 500 BAM in total number of jobs is considered. The share amounts to 50%-60%, which means that **more than a half of persons employed in this sector receive a wage quite close to the minimum wage**.

Figure 3 Share of employees with net wage of 500 BAM or less in total number of employees, per classification of activities, September 2016



Source: RS Tax Administration

This suggests that RS economy still significantly relies its competitiveness and profitability on low wages and each significant increase of wages would have impact on cost structure and allocation of income in these sectors. Pursuant to this, **dialogue on minimum wage needs to be harmonized with the dialogue on general wage levels and wages in individual sectors**.

Minimum wage convergence processes in EU, decrease on unemployment rate in RS and emigration from RS[24] lead to a conclusion that it is **necessary to adjust i.e. increase the minimum wage**. Emigration of working population results in a lower workforce offer on RS labor market, which along with decrease of unemployment rate creates a pressure to increase the costs of labor.[25] This could be a signal to all actors in RS that it is necessary to adopt a new approach to wage setting due to the impact of ever increasing changes in RS labor market.

It is evident that, at this moment, a large gap exists between the needs of workers and their families and what the economy is capable to pay. **This gap cannot be eliminated through a single minimum wage adjustment**, without any adverse economic effects. This suggests that social partners should agree on a middle-term and a long-term goal for this policy- i.e. successive adjustments based on trends identified in mutually agreed indicators. This could also lead to an improved sense of safety and optimism in the RS labor market.

[24] See chapter Workforce mobility and convergence of wages and productivity in EU labour market.
[25] For more information on labour market mechanisms and impacts of various factors on cost of labour see: Đukić, O., Martić, M., Jakovljević B. (2008). Basic labour market mechanisms (*Osnovni mehanizmi tržišta rada*)

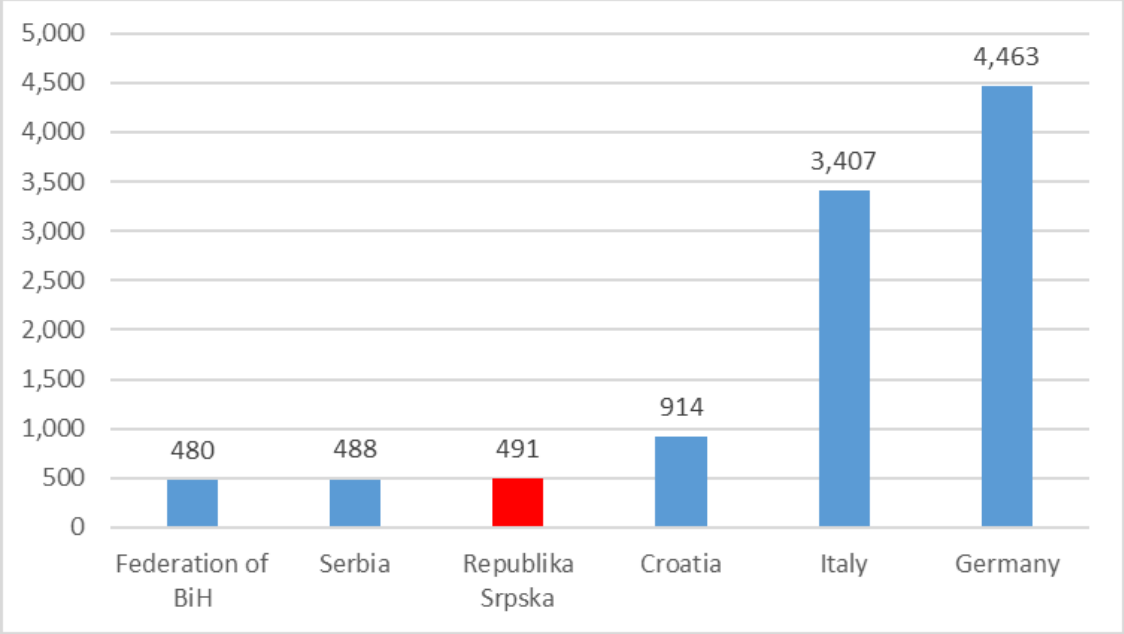
3. PROCESSING INDUSTRY

3.1. WAGES AND PRODUCTIVITY IN THE PROCESSING INDUSTRY

Approximately 90% of BiH exports comes from processing industry[26] which makes it a sector in which international competitiveness is of high importance.

The average wage in the processing industry in Republika Srpska remained low in 2016 and amounted to 960 BAM gross or 626 BAM net. It was stated in previous paragraphs that more than 50% of workers employed in the processing industry are registered to receive a net wage lower than 500 BAM. However, **wages in FBiH and Serbia processing industries are on almost identical levels, which suggests that competitiveness of this sector in the region is based on very low wages**. The ratio between the wages in BiH processing industry and those of its main trading partners is presented in Graph 4. The average gross wage in German processing industry is 4.463 EUR and is 9.1 times higher than that in RS.

Figure 4 Average gross wage level in processing industry in 2016 (in EUR)



Source: Statistics agencies of countries and entities, central banks of Serbia and Croatia and author's calculations
Notes: Data on gross wages in Serbia and Croatia were presented in EUR. Calculation was done based on historical information on exchange rates; Estimate for Italy was done based on a relative relation between compensation cost in processing industries of Germany and Italy, source https://www.bls.gov/news.release/pdf/ichcc.pdf

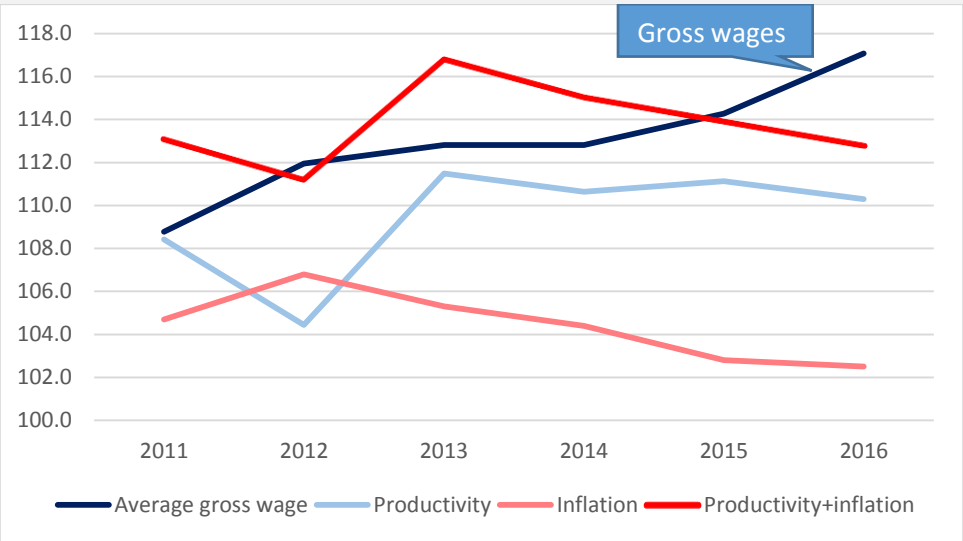
In the period 2010-2016, the average gross wage in the RS processing industry increased by approximately 17% (amounting to 820 BAM in 2010). It can be seen in the Graph 5 that this growth

[26] According to the data from Agency for Statistics of BiH, 2016

was higher than productivity growth which reached 10.3% in respective period. Since all value trends in the Graph below are presented comparing to 2010, it is clear that productivity trends have been stagnating in the last 4 years. If we look into inflation trends (CPI), it is evident that prices decreased during the last 4 years (deflation).

If the gross wage increase in RS is compared to the increase of productivity and inflation together in period 2010-2016, it is evident that, historically, a certain level of correlation existed, but it needs to be noted that gross salaries increased by 4.3 percentage points. **However, due to the fact that the growth of wages in the processing industry started from quite low level, they are still low.**

Figure 5 Average gross wage trends and trends of selected indicators in RS (2010=100)

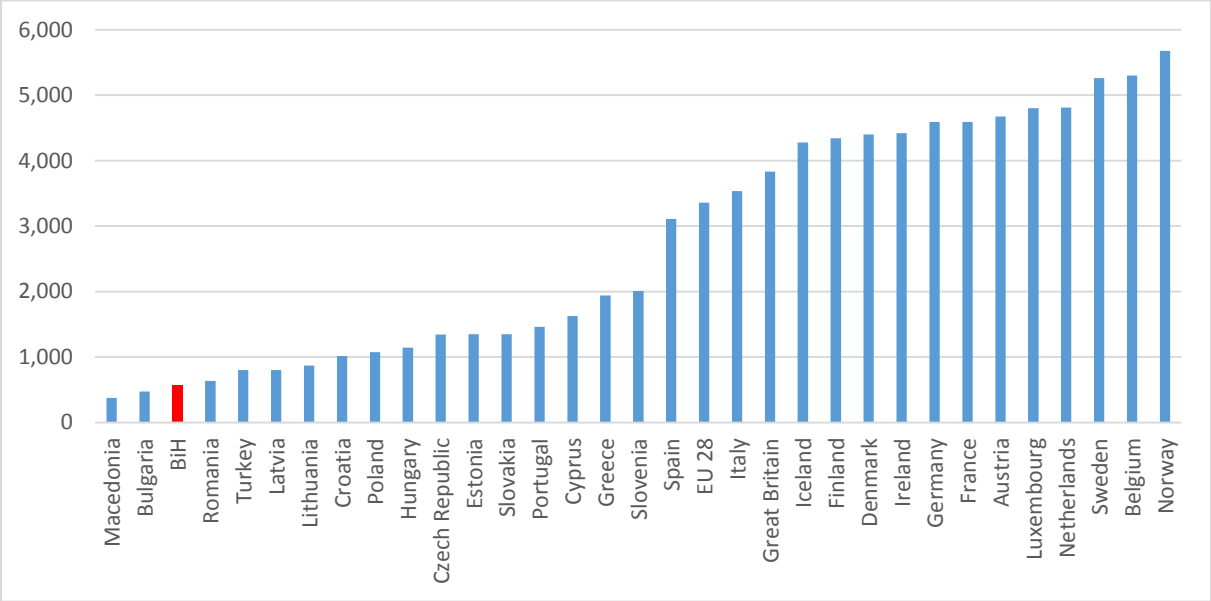


Source: RS Institute of Statistics and author's calculations

In order to obtain a wider perspective on position of domestic wages in relation to European Member States, the following graph will present *Eurostat* data on average labor costs on monthly level for mayor part of countries.[27] It is evident that BiH has higher labor costs than Macedonia and Bulgaria and that when labor costs are considered, BiH is followed by Romania and Turkey.

[27] Eurostat defines labor (personnel) costs as the total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees, as well as home-workers) in return for work done by the latter during the reference period. Although this indicator is similar to gross wage, in statistical-methodological sense, these two indicators differ (personnel costs, among other, include the gross wage). Data on personnel costs for BiH represent Eurostat's estimation, and data on RS level are not available.

Figure 6 Labour costs in processing industry, 2015* (in EUR per month)

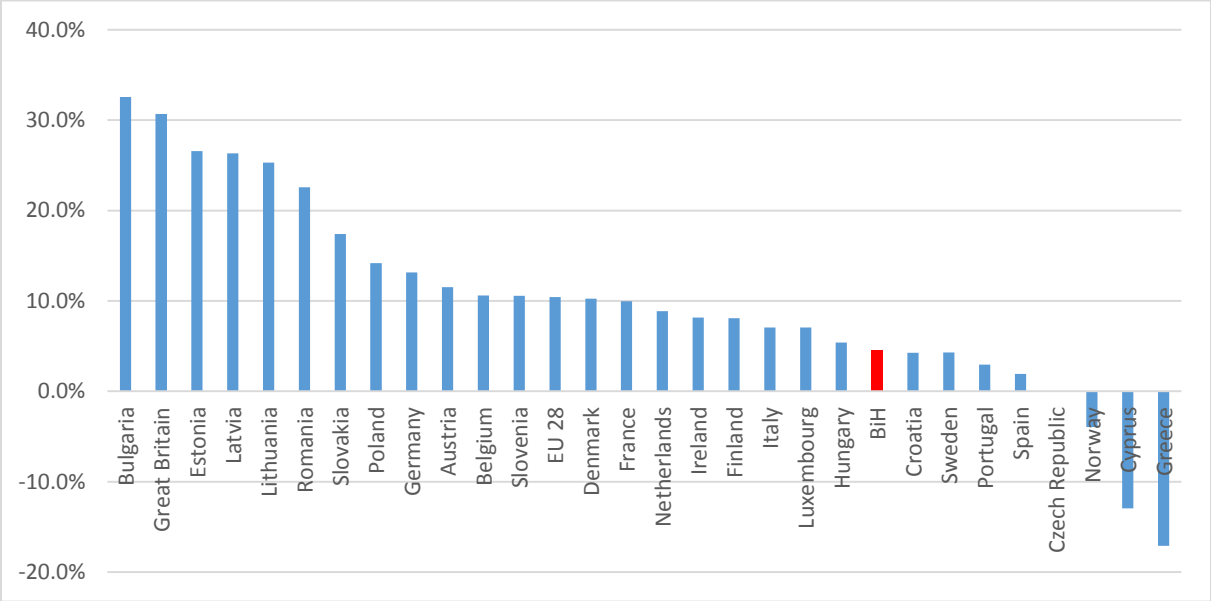


Source: Eurostat and author's calculations

**Note:* data for Turkey are for 2014.

Again, to obtain a wider perspective on wage level trends in previous period, *Eurostat* data on labor expenditure in a larger number of countries will be used. Since these data for BiH are available for period 2011-2015, the same period will be in the focus for other countries. It is evident from the graph below that 4.5% increase of labor costs in BiH processing industry in this period was quite low in comparison to the EU Member States and the EU 28 average (10.4%). Most of new Member States experienced significantly higher increase, led by Bulgaria (32.6%), and except Croatia (4.3%). The decrease in this parameter was registered in several countries, with the highest drop recorded in Greece (-17.1%).

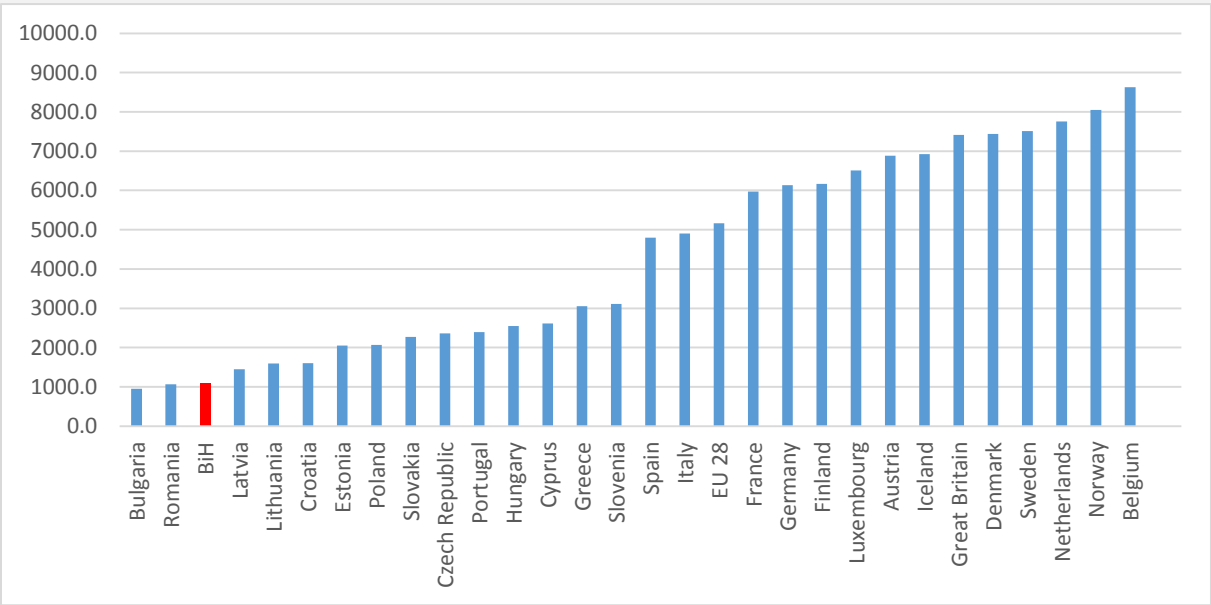
Figure 7 Changes in labor costs, 2011-2015 (in %)



Source: Eurostat and author's calculations

Productivity level in any given sector can be estimated based on the average value added per employee. Graph 8 shows comparison, across countries, of values which represent value added created per an employee in the processing industry on monthly level. Again, significant differences between countries are evident on the graph. For example, average value added per employee in BiH is 1,100 EUR, while in Germany it amounts to 6,133 EUR.

Figure 8 Value added per employee in processing industry on monthly level in current prices (EUR)



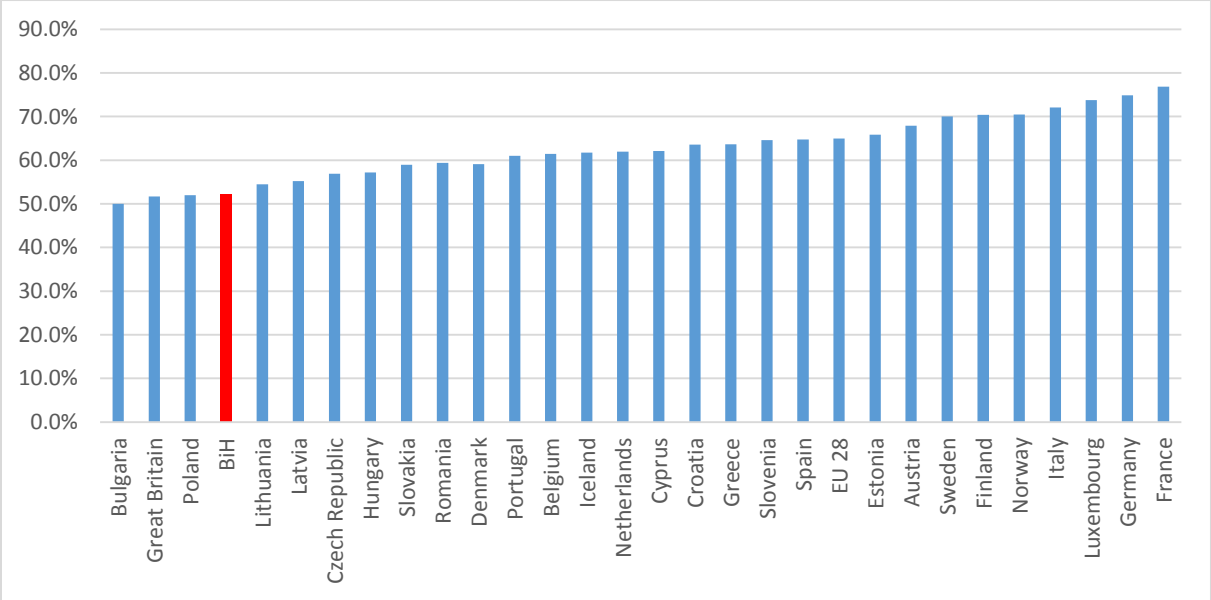
Source: Eurostat

Note: Indicator used - Apparent labor productivity (Value added at factor cost per person employed)

Although the differences in productivity are large, they are still smaller than the differences in labor costs. For example, the value added per employee in Germany is 5.6% higher than in BiH, while average personnel costs are 98 times higher.[28]

The same situation occurs, however significantly less harsh, when BiH and Croatia are compared- value added per employee is 45% higher and average personnel costs are 77% higher in Croatia than in BiH. This suggests that, when compared to majority of other countries, **BiH processing industry allocates relatively smaller share of value added to the wages of their employees.** This can be seen on Graph 9, which presents cross-country comparison of average personnel costs share in the value added per employee in processing industry. It is evident that in BiH, the share of labor costs in value added amounts to 52.3%, while such average share on the EU level amounts to 65%. in three countries. In only three countries is this indicator lower than in BiH, with the lowest value registered in Bulgaria (50%). It is interesting to note that the United Kingdom is one of these three countries (51.7%). In general, this information suggest that new EU Member States have a lower share of wages in value added in comparison to old Member States. The highest share is registered in France (76.8%).

Figure 9 Share of personnel costs in value added per employee- processing industry



Source: Eurostat and author's calculations

Change of this parameter in a country is of course directly connected to the wage level. If all other parameters remain unchanged and wage share in value added increases - it means that wage level has increased in that country. Had, for example, the BiH processing industry allocated the same share of value added to the personnel costs as Croatia, the average gross wage in BiH processing industry

[28] According to the above stated Eurostat data.

would (number of employees remaining the same) amount to 1,367 BAM gross, in 2015, or 844 BAM net.[29]

In these considerations, it is necessary to consider "illegal employment" (undeclared work) and payments of wage portions in cash (to avoid paying full contributions and income taxes). If share of such form of employment is higher in BiH than in Croatia, then the relative amount of actual wages has been underestimated in BiH. In other words, BiH might be allocating a higher share to wages of the employees than presented, through illegal payment forms.[30]

3.2. PRICES IN PROCESSING INDUSTRY- ARE OUR PRODUCTS UNDERESTIMATED?

Questions related to domestic products price trends in comparison to those of our important trade partners are often raised when wage levels in sectors open to international competition are discussed.

Underlying this question is actually the hypothesis that **prices of products produced by domestic industrial producers "do not follow" growth, i.e. that they increase more slowly than those of foreign producers, which worsens trade conditions to the detriment of local producers**. This hypothesis is based on assumption that market mechanisms in international trade do not function completely, and that in such conditions large foreign buyers can influence the prices using their oligopoly position.

For example, a domestic producer in processing industry is supplying a foreign producer which uses this (semi) product in his production process. If price of such foreign producer's product increases faster in a given period than price of domestic producer's (semi) product, it allows for a higher value-added increase for the foreign producer compared to the domestic one (this also applies to productivity). Therefore, a foreign producer would more easily come to a point where he can increase the wages of his employees, than the local producer.

In order to try to find an answer to this question, prices of RS processing industry products for foreign market have been compared with prices of EU processing industry products and those from several other countries. Comparative trends of these prices in the period January 2013 - April 2017 are presented in Graph 10 where it is shown that **prices of locally produced goods increased faster than comparable prices on the EU level or in other selected countries.** When compared to price

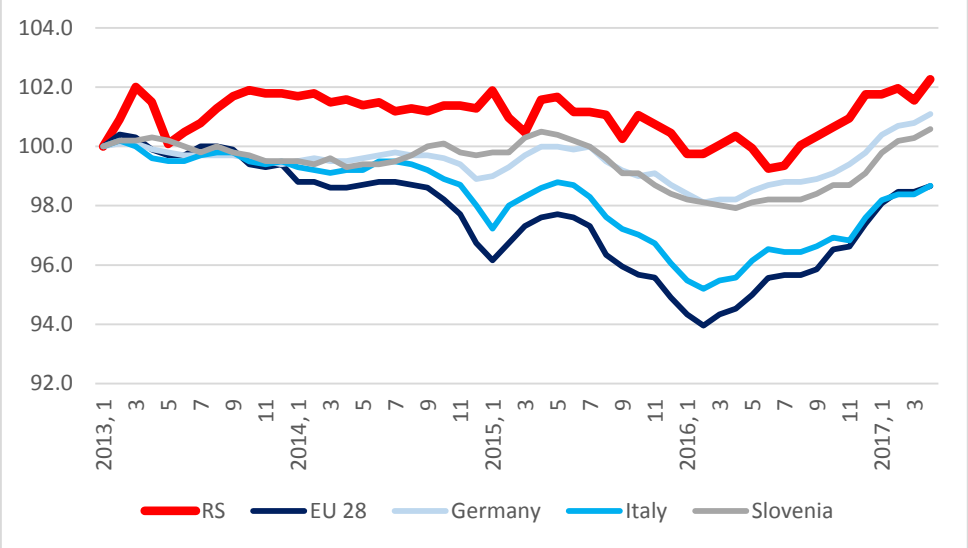
[29] Under condition that such additional personnel costs are used to finance wages. Calculation was done based on Eurostat data on personnel costs and value added per employee in processing industry across countries, and on rates of contributions and taxes on income in RS.

[30] According to a survey implemented in 2015 by Center for Research and Studies GEA, in cooperation with Union of Employers' Associations of Republika Srpska, more than 45% of employers surveyed in RS believed "cash in envelope" practice existed in their sector, while 17% believed more than half a of their competitors applied this practice (Center for Research and Studies GEA, 2015, Informal Economy in Republika Srpska-Causes and Recommendations-*Neformalna ekonomija u Republici Srpskoj-uzroci i preporuke*).

levels in January 2013, the prices in the RS processing industry in April 2017 increased by 2.3 percentage points. In the EU, these prices decreased by 1.3 percentage point. In Germany they increased by 1.1 percentage point. They also increased in Slovenia by 0.6 percentage points but decreased in Italy by 1.3 percentage point.

Specific correlation in price trends between the RS and selected countries is clear, as well as that a change in the trends occurred at the beginning of 2013 - from decrease to increase. Graph 11 provides comparison of prices in RS and Germany where a close correlation in price trends can also be seen.[31] Linear trends of these two series of information are almost identical. Thus, this information does not support the above stated hypothesis.

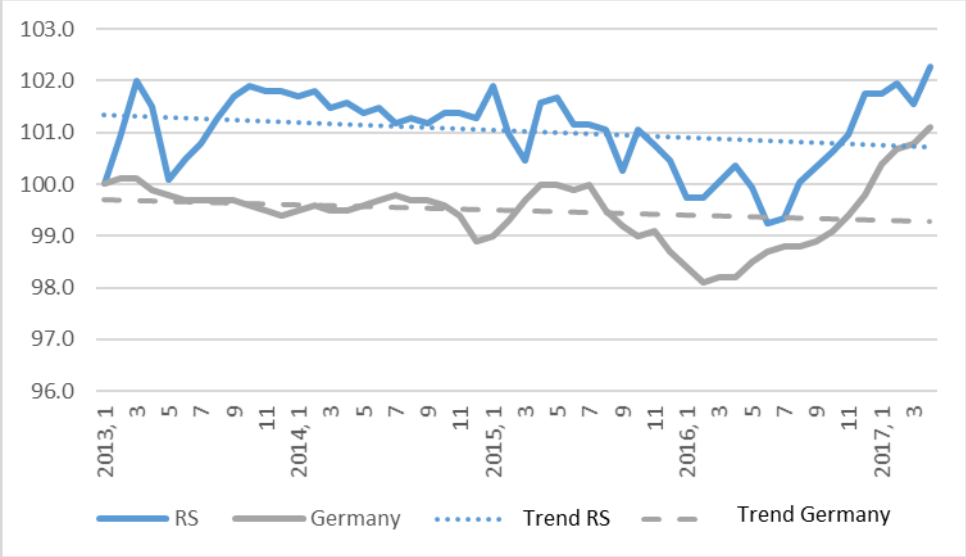
Figure 10 Trends of producer prices in processing industry on monthly level (January 2013=100)



Source: Eurostat, RS Institute for Statistic and author's calculations
Note: producer price index in processing industry for foreign market was used for RS, while the indicator Producer prices in industry, total - monthly data was used for EU and other individual countries

[31] Correlation coefficient between these two series of information is 0.59%.

Figure 11 Trends of producer price index in processing industry on monthly level, with a linear trend- RS and Germany (January 2013=100).



Source: Eurostat, RS Institute for Statistic and author's calculations
Note: producer price index in processing industry for foreign market was used for RS, while the indicator Producer prices in industry, total - monthly data was used for Germany

However, irrespectively of these findings, it is necessary to note that overall processing industries were compared here, which can mask potentially different relations existing on the level of individual industrial sectors, particularly on the level of individual companies.

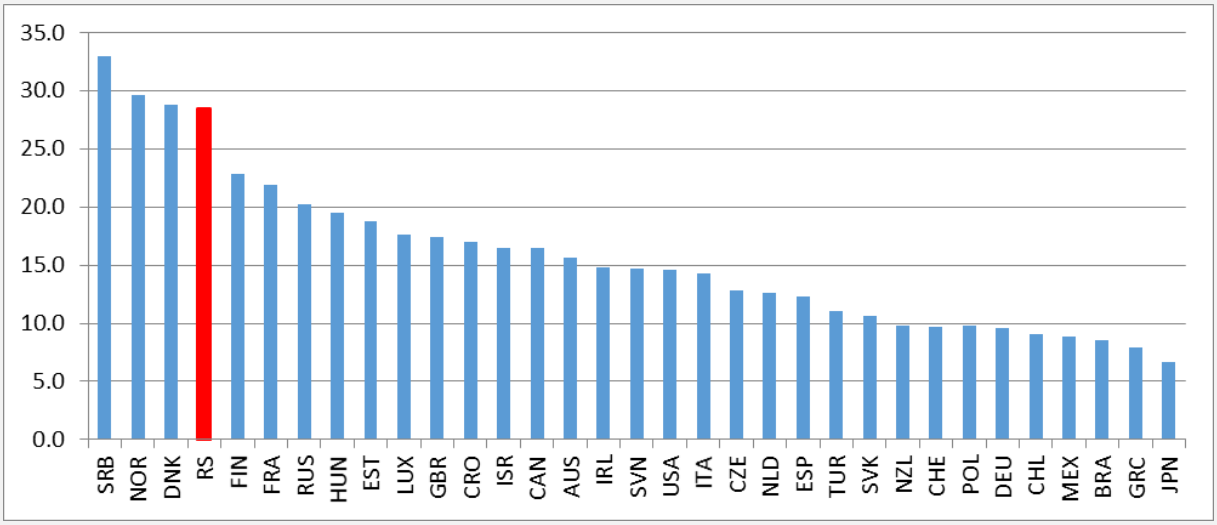
Additionally, these aspects of price trends do not indicate much about the initial levels. For example, if domestic producer sales prices were set low at the very beginning of cooperation with a foreign buyer, an equalized growth of output prices of these two subjects will not make the unfavorable status of local producer any better. **Thus, each producer should periodically review his price policy, in accordance with good business practices**.

4. IMPACT OF PUBLIC SECTOR WAGES

4.1. INTERACTIONS BETWEEN PUBLIC AND PRIVATE SECTOR WAGES

76,099 persons were employed in RS public sector in March 2017, which represents 29.5% of total number of persons employed in RS.[32] It is not difficult to conclude that public sector, as by far the largest employer in RS, has a great impact on entre labor market and that it significantly affects wage setting in other sectors. When the government share in total employment is considered, it becomes evident that, when compared to other countries, RS is at the top of the scale, as shown in Graph 12.

Figure 12 Persons employed in all government levels (percentage of total number of employed persons)



Source: Quarterly Economic Monitor No. 7, Association of Economists of RS SWOT, 2012

In September 2017, the average gross wage in public administration was 1,790 BAM, which is 85% higher than the average gross wage in the processing industry (969 BAM) and 35% higher than average gross wage in RS (1,330 BAM). If these relations are compared to those in FBiH and countries of the region (Table 6 and Graph 13), it can be seen that there is even larger difference between public administration and other sectors in FBiH, while such differences are significantly smaller in other countries.

[32] According to Republika Srpska Institute for Statistics data. The public sector is here defined as each employer with mayor state ownership. If employers with a mixed ownership would be added, number of persons employed in public sector would amount to 113,324 which represents 44% of total number of employed persons.

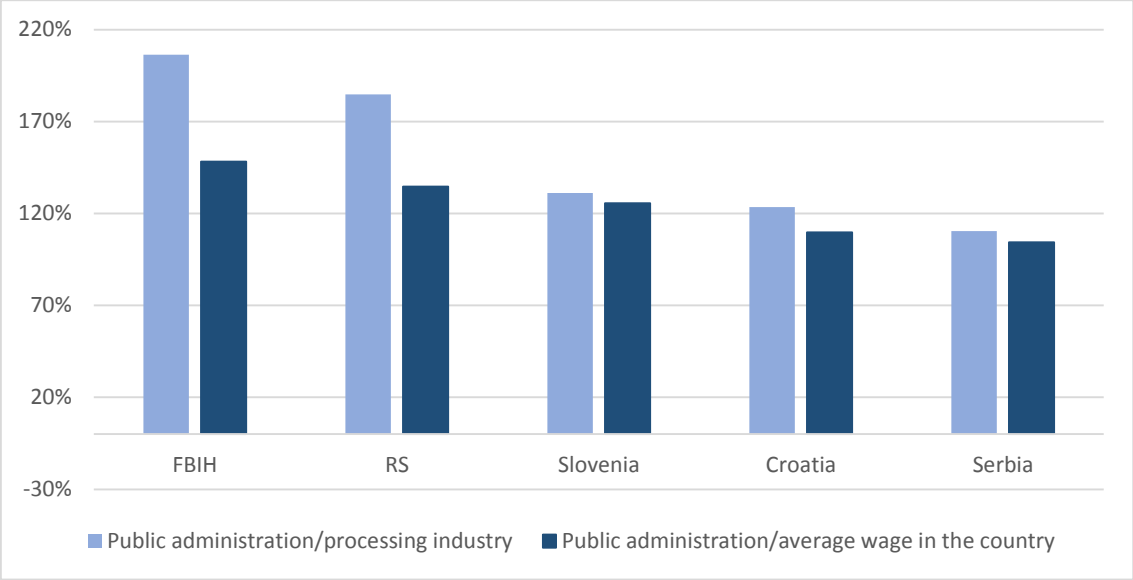
Table 6 Average wages in selected sectors, 2017

	FBiH	RS	Slovenia	Croatia	Serbia
Average wage level	*in BAM*	*in BAM*	*in EUR*	*in HRK*	*in RSD*
Processing industry	934	969	1,535	4,899	62,746
Public administration and defense; mandatory social insurance	1,928	1,790	2,014	6,052	69,340
Average wage in the country	1,301	1,330	1,604	5,515	66,438
Ratio in %					
Public administration/Processing industry	206%	185%	131%	124%	111%
Public administration/all sectors	148%	135%	126%	110%	104%

Source: Institutes for Statistics of the entities and countries concerned, author's calculations

Note: most recent data available on monthly level were used (for RS- September 2017)

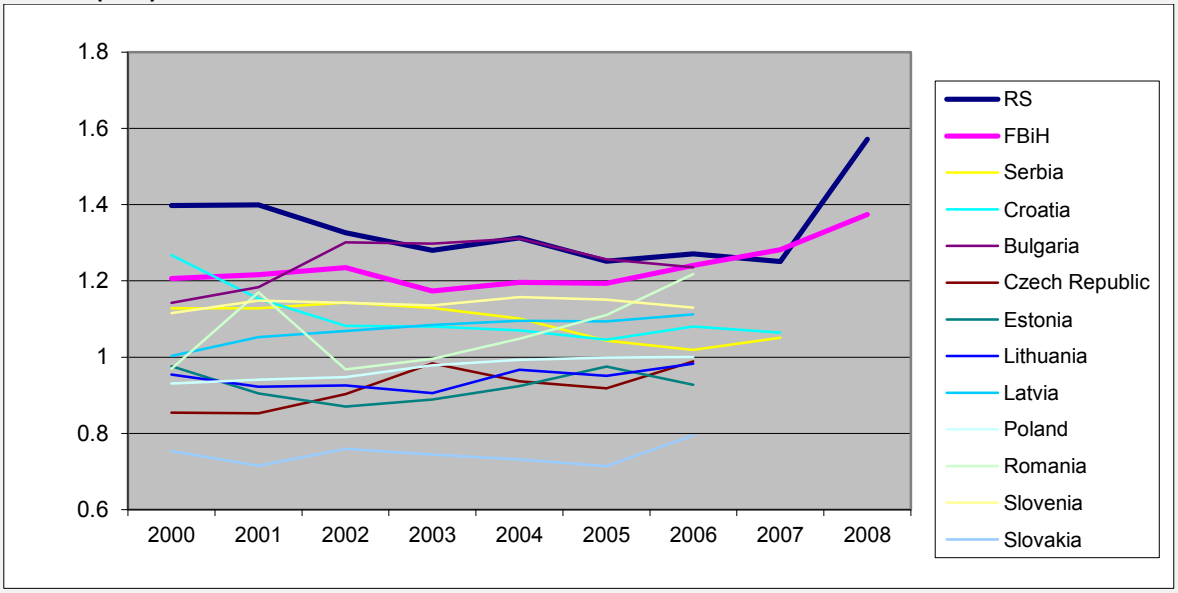
Figure 13 Average wage in public administration in relation to average wage in other sectors in RS (in %)



Source: Institutes for Statistics of the entities and author's calculations

According to the same principle, the ratio between average wages in public and private sectors is significantly higher in BiH than in other countries in transition, which can be clearly see in Graph 14. Enormous effect of public sector wage increases in RS and FBiH in 2008 is particularly visible. This increase was induced by public revenue growth when VAT was introduced. It can be said that significant share of revenues increases brought by VAT was "spent" on BiH public sector wages.

Figure 14 Average wage in public sector in relation to average wage in private sector, per entities and countries (in %)



Source: Institutes for Statistics, *Eurostat*, central banks of Serbia and Croatia, author's calculations

According to GEA Association, the adverse effects of such discrepancy between public and private sector wages, are reflected in following:

1. As by far the largest employer, the public sector, through its wage policy (based on availability of public revenues), disables the development of sound negotiations between employers and trade unions in private sector.
2. Attractiveness of employment in the public sector has an adverse effect on entrepreneurship initiatives, particularly among the youth who often list public sector employment as the most desirable option in their business career.[33]

The GEA Association states that it is necessary to implement a reform of public sector wages: public sector wages need to be properly aligned with private sector wages. Social dialogue in the public sector should also be supported. The new wage setting system should be based on following principle: each workplace in public sector should have the same wage as as a comparable workplace in private sector.[34]

[33] The author is a member of Association GEA. Listed conclusions are published in: Quarterly Economic Monitor No. 7, Association of Economists of RS *SWOT*, 2012

[34] Ibid. For more information on differences between public and private sector wages: Đukić, O. (2009) Public Sector Wages in BiH: Detriment to the Economy? (*Plate u javnom sektoru u BiH: Nanošenje štete ekonomiji?*)

5. EFFECTS OF CONNECTING WITH EU LABOR MARKET

5.1. WORKFORCE MOBILITY AND CONVERGENCE OF WAGES AND PRODUCTIVITY ON EU LABOR MARKET

Workforce mobility means that workforce moves from one workplace or labor market to another. When the workforce is movable, conditions exist for an intensive opening of workplaces and closure of old ones, whereby, as a rule, new workplaces are more productive than the old ones. In this way, overall labor market becomes flexible and workers have opportunity to change jobs. A faster distribution of workforce on labor markets in developed economies contributes to productivity growth since resources are concentrated on more productive activities. Such labor market encourages companies to open new jobs and contributes to higher employment level.[35]

Workforce mobility in a specific labor market segment is often higher on international level than within a country. Discrepancy between qualifications in workforce supply and labor marked demand in a country (structural unemployment) represents the main reason for this, as well low workforce demand and low wage level in the country, which disable internal relocation for purpose of work.

Let us take a local market which does not have capacity to engage all unemployed persons with medical qualifications as an example. If a person is offered employment in another town within the country (distance being such that it requires relocation), low wage level will represent an obstacle in accepting such a job (which implies moving i.e. relocation expenses). However, if demand for workforce with these qualifications exists in the EU Member States, the same person will be able to accept the job offered in some of those countries since the wage level is several times higher.[36]

When these structural differences between countries are quite significant, labor migrations intensify, even more so as administrative obstacles become weaker, for example cancelation of visa regime for BiH. In accordance with this, **emigration of RS population intensified in the previous period**. In the period 2010-2015, 92,638 persons were registered to have emigrated from BiH to an EU Member State. These values are increasing from annually. If this trend continues in period 2017-2021, 140,000 persons are projected to emigrate from BiH.[37]

Emigration and negative population growth lead to a decrease of unemployment rate without a corresponding increase in the number of jobs. According to the information from the annual

[35] Đukić, O., Martić M., Jakovljević, V. (2008) Basic Mechanisms of Labour Market (*Osnovni mehanizmi tržišta rada*)

[36] Only one element of workforce migration was described in the previous example. Workforce represents a multi-dimensional phenomenon influenced by elements such as expectations concerning safe employment and wage trends in the homeland and abroad, differences in rights of workers, general living conditions etc.

[37] According to forecasts from Pucar, S. (2017) Analysis and Projections of Trends in the Republika Srpska Labour Market 2017-2021 (*Analiza I projekcije tržišta rada u Republici Srpskoj 2017.-2021.*)

workforce survey, **unemployment rate decreased from 27.3% in 2013 to 24.8% in 2016**. It is well-known that **decrease of unemployment rate creates an effect of pressure to increase wages**.[38]

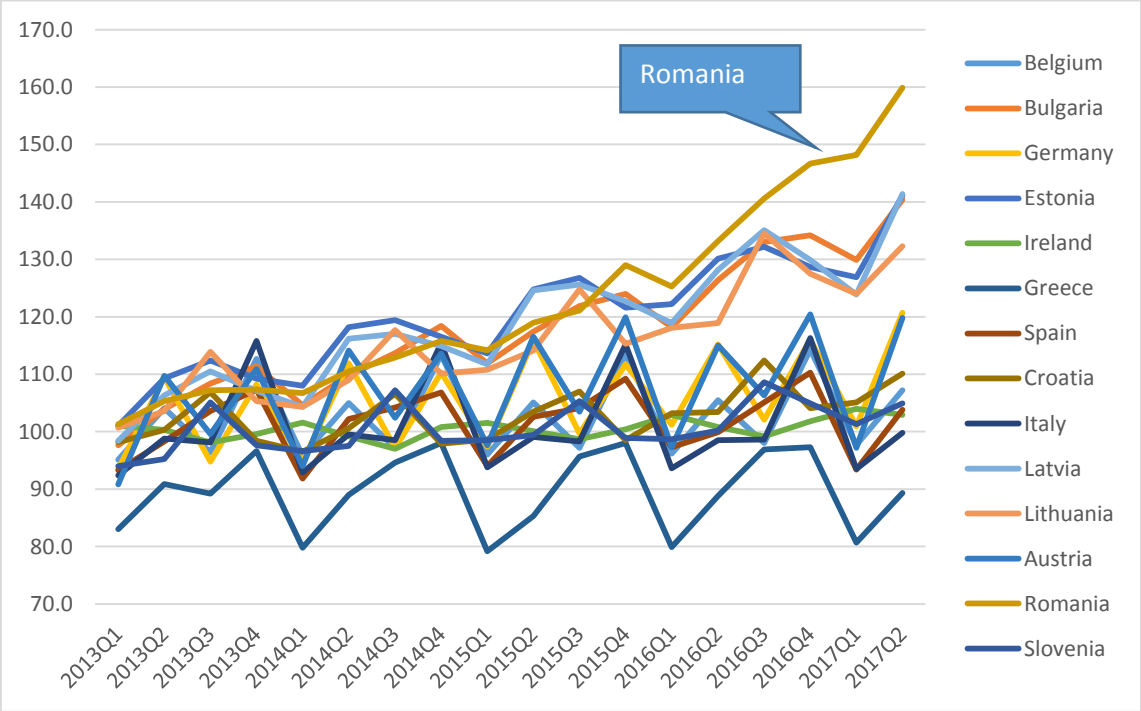
If the 2016 changes in wage levels across the EU Member States are considered, it is evident that Baltic countries, Hungary and Romania experienced the highest wage growth, while these countries still have comparably low wages, which, in turn, points to **wage convergence process between countries**. According to the European Commission, these changes reflect the „catching-up" in GDP per capita.[39] **Thus, if wage growth is to be sustainable it must be accompanied by productivity growth,** which is reflected in foreign trade balances (surplus/deficit). This is particularly important for countries with foreign trade deficit, such as BiH, as it enables the increase of coverage of imports by exports ratio.

Wage trends in 2016 are consistent with the unwinding of imbalances accumulated in the EU Member States before 2008. Nominal unit labor costs[40] continued to grow faster in countries that had recorded current account surpluses before the crisis than in countries previously characterized by current account deficits. Moreover, the economic rebalancing of the second group caused an increase of employment in sectors which contribute to reduction of existing deficits.[41]

The convergence process, which implies a faster wage growth in countries with initially low wage levels is still evident in period 2013-2017. According to *Eurostat*, the highest wage growth by the end of second quarter of 2017, compared to 2012, was registered in Romania (+60%), followed by Latvia and Estonia (+41% each) and Bulgaria (+40%). Graph 15 presents different wage increase trends across countries. The lowest, i.e. negative growth was registered in Greece (-11%) due to important structural changes occurring after debt crisis escalation.

[38] More about the inverse relationship between wage growth and unemployment rate, also known as "Phillips curve" and its characteristics in 2016, in the period 2000-2016, in the EU Member States can be found in: European Commission (2017). Labor Market and Wage Developments in Europe – Annual Review 2017.
[39] European Commission (2017). Labour Market and Wage Developments in Europe – Annual Review 2017
[40] Unit labour costs measure relation between cost of labour and productivity. These are often used as a measure of international price competitiveness. If unit labour costs increase faster than in other countries, price competitiveness is getting lower, and vice versa.
[41] European Commission (2017). Labour Market and Wage Developments in Europe – Annual Review 2017

Figure 15 Wage index in industry, construction and services together, quarterly, 2012=100



Source: Eurostat

The European Commission believes that the recent economic crisis has temporarily suspended socio-economic convergence process between the EU Member States, and that is necessary to continue implementing structural reforms in labor markets, success of which requires quality social dialogue. Following the significant efforts to reduce costs and labor market rigidities, **after 2013, the focus of the reforms shifted towards strengthening the social safety instruments and reducing the tax burden on labor**.[42]

[42] Ibid.

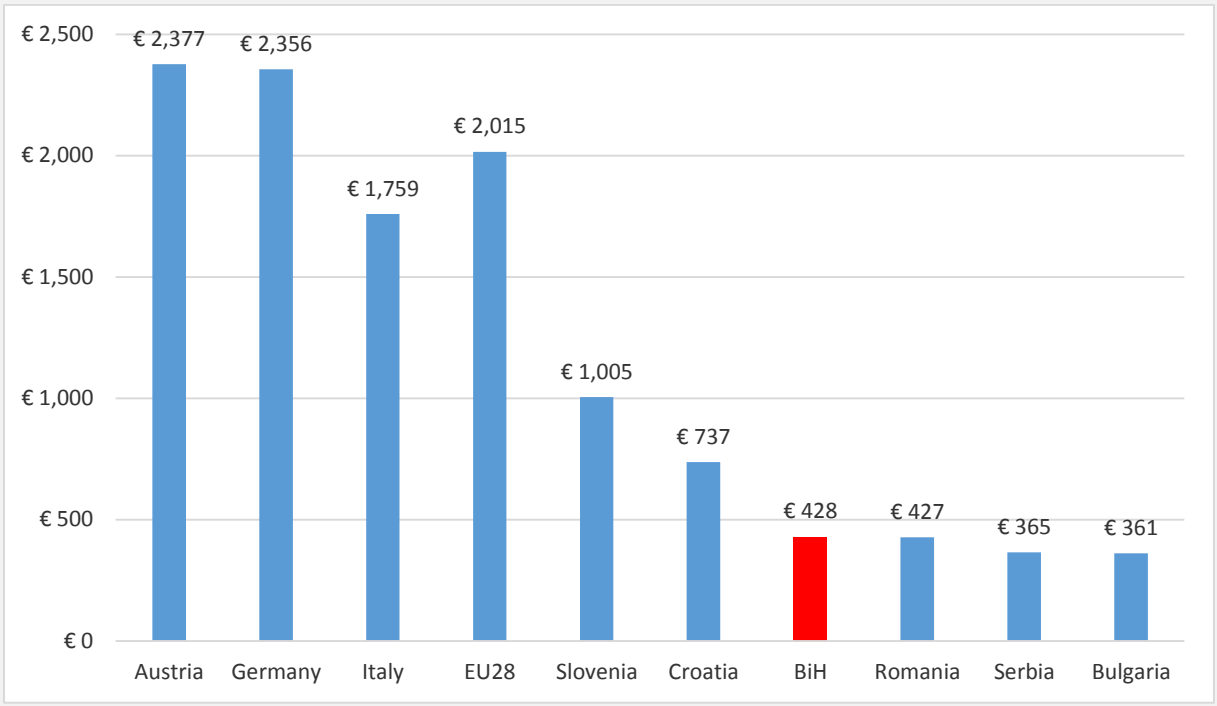
6. WAGES IN RELATION TO PURCHASING POWER

6.1. AVERAGE WAGE IN BIH COMPARED TO OTHER COUNTRIES BASED ON PURCHASING POWER

In this section, average wages are compared across countries, based on their purchasing power. Since consumer prices significantly differ across countries, it is not possible to purchase the same quantity goods or services for the same amount of EUR in different countries. Thus, by adjusting nominal wage values using these differences in prices, we can compare the wages in different countries based on their actual purchasing power. This helps us find out how many more (or less) goods and services can be bought for an average wage in one country, compared to the average wage in another country.

Graph 16 presents nominal average gross wage across countries in 2015. It can be seen that average gross wage in BiH was 428 EUR which is almost on the same level as in Romania, but higher than in Serbia and Bulgaria.[43] Average wage on EU 28 level was 2,015 EUR (4.7% higher than in BiH). Average wage in Germany amounted to 2,356 EUR (5.5 times higher than in BiH).

Figure 16 Average net wage, 2015 (in EUR)



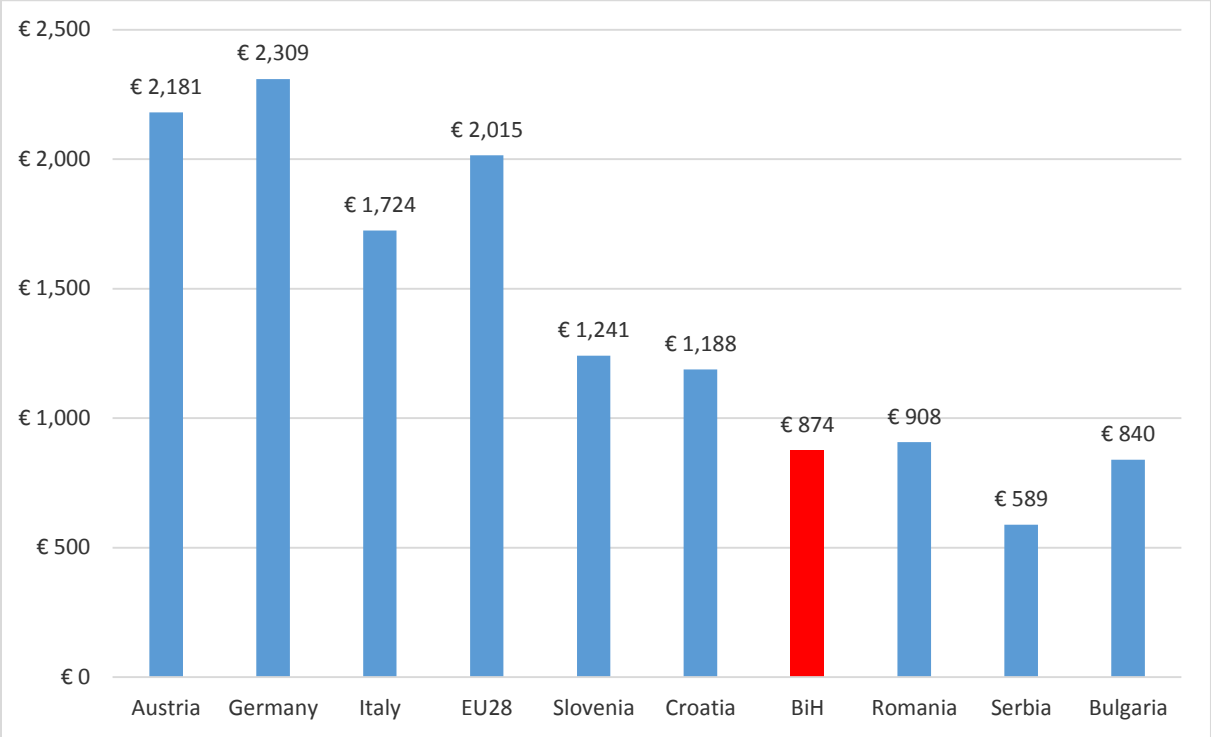
Source: *Eurostat*, Statistics agencies of BiH and Serbia, National Bank of Serbia

Note: indicator Net earnings - Single person without children, 100% of AW was used for EU countries

[43] Average wages on country level were compared here, opposite to previous comparisons which referred to processing industry

The purchasing power parity (PPP) is used to compare wages in different countries based on the purchasing power. Through PPP wages are adjusted by differences in prices existing among the countries. Graph 17 presents gross wages in all countries, in EUR, adjusted in relation to price level in the EU 28. After this adjustment, gross wage in BiH amounts to 874 PPP- i.e. it is approximately doubled. **This means that for 1 EUR in BiH it is possible to buy approximately double quantity than in EU 28.**[44] The relation between average wage in EU28 and BiH is reduced to 2.3 and that between Germany and BiH to 2.6.

Figure 17 Average net wages adjusted by differences in prices across countries, 2015 (in EUR divided by purchasing power parity price index for individual consumption, EU 28=1)



Source: OSCE, Eurostat, statistics agencies of BiH and Serbia, National Bank of Serbia

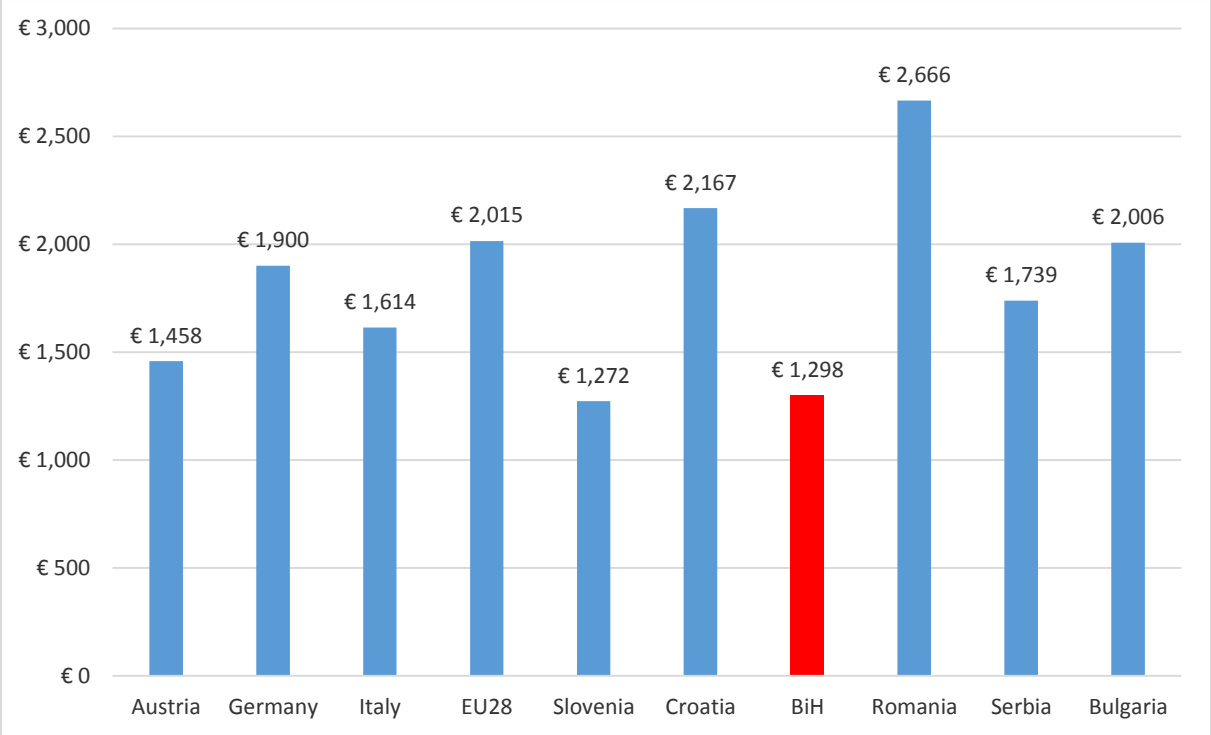
Note: OSCE data were used for PPP- data on purchasing power parity for relation of prices across countries, 2014, where average EU 28 prices served as base (data available on http://stats.oecd.org)

It is evident that adjustment of wages by differences in prices between the countries leads to an attenuation of the relative relation between wages. This adjustment was done using OECD index on price relations and it represents an aggregate price index for various categories of products and services (food; clothes and footwear; housing, water, electrical power, gas and other fuels; health services etc.). It is interesting to note that differences in price levels significantly differ across these categories. For example, extremely high differences in prices between countries exist in following categories: housing, water, electrical power, gas and other fuels. Thus, if employed persons would, for example, spend their entire earnings on these categories, differences in purchasing power would

[44] This also means that a person in BiH with a wage amounting to 1,931 BAM can buy the same quantity of goods and services as a person with average wage in EU 28. Person in BiH with a wage amounting to 2,213 BAM can buy the same quantity of goods and services as a person with average wage in Germany.

be even more drastically reduced, as it can be seen in Graph 18. Moreover, the purchasing power of average wage in Romania would be the highest, due to extremely low prices in this category (16% of EU 28 average price, in EUR). According to the same principle, the **relation between the purchasing power of average wage in Germany and BiH is only reduced to 1.5 in case both wages would be entirely spent on housing, water, electrical power, gas and other fuels**. This information could be of great help to potential emigrants- persons making financial comparisons when making decision on whether to leave current job and accept a particular job abroad. This could also be particularly important for persons offered a lower wage job in a bigger city (which implies extremely high prices in the housing domain).[45]

Figure 18 Average net wages adjusted by difference in prices across countries, 2015 (in EUR divided by purchasing power parity price index for category- housing, water, electrical power, gas and other fuels, EU 28=1).



Source: OSCE, Eurostat, statistics agencies of BiH and Serbia, National Bank of Serbia

Note: OSCE data were used for PPP- data on purchasing power parity for relation of prices across countries, 2014, where average EU 28 prices served as base (data available on http://stats.oecd.org)

[45] Of course, one can assume that such decisions on whether to leave or to stay generally imply comparisons in some other elements, such as expectations of possible business progress, employment safety, workers', social and other rights, employment possibility for other family members, educational possibilities for children, other social conditions etc.

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8. TABLES AND FIGURES