Labour taxation in BH

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Executive summary

High labour costs are frequently blamed for underdeveloped private initiative and low level of competitiveness of domestic economy, as well as for high share of informal economy and low levels of employment. In this paper, we will discuss the role and effects of tax and benefit system in the context of labour market performance and review recent progress made by the entity governments in reforming labour tax and benefit system aimed at increasing economic incentives for higher employment and job creation. In the absence of statistical index on labour costs, and on the basis of the author's own calculation of main labour costs indicators, the data are compared and assessed with EU levels. The study examines the level of tax wedge in international context and the benefit systems (*especially healthcare and pension insurance*) with a view to evaluate recent reforms and provide recommendations for further action for the Government of the Federation of BH.

Introduction

By taxing labour, a tax wedge appears between labour costs and net wage received by employees. OECD[1] (2007) defines tax wedge as a sum personal income tax and employee plus employer social security contributions together with any payroll tax less cash transfers, expressed as a percentage of labour costs. According to this definition, tax wedge on labour represents the difference between what employers pay out in wages and social security contributions and what employees take home after having paid all taxes.

Labour costs are often commented in discussions on international competitiveness and allocation, or, better say, reallocation of production facilities, which intensified in recent years with the growing process of globalization. According to Global competitiveness index (GCI[2]) index, BH economy was ranked 107th in 2008 (out of 134 countries). Unfortunately, BH has not managed to attract much FDI inflows in recent years. The reasons are various. However, the issue of labour costs becomes even more important with the EU integration process. Especially enlargement process of Eastern European countries fortified the importance of labour cost issue in EU.

[1] OECD (2007)

[2] WEF (2008).

Taxation on labour in EU countries is said to be higher than in the rest of OECD countries. In continental Europe, tax wedge exceeds 50% of gross labour costs, e.g. in Germany, Belgium, Hungary and France. South Korea and Mexico are the only OECD countries where tax wedge is below 20% (*OECD 2006*). High tax wedge on labour have been falling in many EU countries in recent years with the aim of attracting more people into employment, which is the aim set in Lisbon agenda. At a certain level of wages, higher tax wedge increases unemployment and produces incentives for firms to be more inclined to work in informal sector of economy. Whether and to what extent the introduction of labour taxes affects the outcomes of labour market depends on the elasticity of demand and supply curves and the flexibility of labour market, whereby the later depends on trade unions (*in many EU countries social partners have strong influence on factors such as employer's social security contributions*), minimum wage levels and mechanisms, etc. It is said, the bigger the wedge, the greater are the barriers to job creation.

The study analyses the "gap" - what employers pay for labour and what employees take home as a pay in Federation BH and compares it with the levels in Republika Srpska and EU countries, and thus provides answers to the following questions:

1. What are the characteristics of labour costs, tax wedge on labour, and unemployment rates in BH and its two entities?
2. What kind of tax system is implemented in Federation BH and what difference does it make in regard to previous labour tax policy?
3. Whether reduction of labour costs are the only way to increase demand for labour?

The rest of the paper is organized as follows:
The first part of the paper defines the background of the problem. *Second part* discusses recent findings on labour costs in BH, discussing the characteristics of labour costs, the tax wedge on labour, the level of unemployment. Third part reviews the system of social secyrity benefits (health and pension system) in respect to potential reduction of social security contribution rates which should add to lowering tax wedge on labour. *Fourth part* constitute the main body of underlying policy study taking into consideration the labour tax policy recently implemented in BH entities and compares the level of tax wedge between entities as well as with EU countries. The paper is summed up concluding remarks and recommendations.

List of abbreviations

GDP	Gross domestic product
DI	Direct investments
FDI	Foreign direct investments
PIT	Personal income tax
SAA	Stabilisation and Assocciatino agrement
SSC	Social security contribution
SSS	Social security system
ITR	Imlicit tax on labour
EBRD	European Bank for regional development
CoE	Council of Europe
ECSS	European Code of Social Security
GCI	Global Competitiveness Index

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Problem description

What makes labour taxation policy a relevant issue?

With an increasing globalization, competition between different states over foreign investment intensifies, and countries, in order to secure more international financing, keep labour costs as low as possible. Labour costs are relevant not only for attracting foreign investments, but also for domestic firms that export their product to the states with higher labour costs. However, in transition economies, foreign direct investments (FDI) are seen as a primary vehicle for new job creation[3]. Unfortunately, BH has not much benefited from the FDI inflows *(the lowest FDI stock in the region as well among transition economies, UNCTAD[4])* and know-how in comparison to transition economies in Eastern Europe *(FDI in BH mostly linked to privatization of inefficient state owned companies with necessity for rather job destruction than job creation)*. According to EBRD data, in the period 1989-2007 BH attracted some 1.348 USD[5] per capita of FDI *(only Macedonia, with 1.117 USD and Albania, with 830 USD show lower FDI inflows per capita than BH)*. The BH economy is labour intensive, while its current high level of labour costs does not make it competitive and capable of attracting more investments.

The inability of labour market to generate jobs has been traditionally linked to high taxation of labour, through high social security contributions and income taxes, and the wage-setting mechanisms (*EU Progress Report*). High labour costs (*particularly, high social security contributions*), from the perspective of entrepreneurs, are considered to be the main obstacle to development of private sector, especially SMEs (World Bank)[6]. They are frequently blamed for contributing to growth of employment in informal sector. In the EU enlargement paper for Western Balkan (*2009*), EC recommends reduction of tax burden on labour by broadening the tax base, which is the policy accepted by the FBH government and outlined in its 2008-2010 Program. Detrimental effects of high labour costs on growth and employment are to be found in large body of literature *(Daveri and Tabellini, 2000; Haltiwanger et al., 2003; Nickel, 2003; Bassanini and Duval, 2006).* Moderate economic growth in BH in recent years *(in average 5% over the period 2000-2007)* was rather characterized as jobless. The employment level stagnated at 30%[7] and accounts for less than two times the employment level in EU (*64.8% for EU15 and 66.2% in EU25 in 2006%[8])* and are among the lowest in the region[9] *(Serbia 44,75%, Montenegro 42,7%, Albania 56,4%, Croatia 44,1%, Macedonia 44,1%).* Almost one half of the working age population in BH is active *(43,9% in 2007[10], EU27 70,5%)*. Unemployed population makes 29% (*LFS 2008*) of labour force which further consists of 72.1% [11] wage and salary workers, primarily employed in service sector (*trade, public service and education*) and industry, and self employed (*22,1% of total number of employed*) mostly employed in agriculture as a predominant form of the country's informal sector employment.

Tax wedge, i.e., difference between labour costs incurred on employer and employees take home wage, can significantly affects the outcomes of labour market *(Researchers of the Centre for Social and Economic Research - CASE),* especially in relation to low-skilled labour. The study warns of the risks of high labour taxation in CEE countries and speaks in favor of lower taxation for low skilled labour *(M. Gora, A. Adziwill, A. Sowa and M. Walewski)*. Bassanini and Duval *(2006)* used the pooled data for OECD countries in the period from 1982 to 2003 and found that a 10 % percentage points reduction in tax wedge would be associated with a drop in unemployment rate by 2.8 percentage points. The same result is confirmed by Nickell (2004)[12], where "a 10 percentage points rise in the tax wedge reduces labor input by somewhere between 1-3% of

[3] World Bank (2004a)

[4] UNCTAD

[5] EBRD

[6] World Bank. (2002)

[7] BHAS

[8] Eurostat. (2006)

[9] ILO (2007)

[10] BHAS (2008)

[11] BHAS

[12] Nickell. (2004).

the population of working age. Recent study for the Western Balkan region (*Arandarenko* 2008) has used econometric model to estimate the likely impact of labour taxes on employment in Western Balkan countries. Cross country regression yield a short run labour demand elasticity of - 0.21% meaning that 10% increase in labour costs would, in a short term, result in a decrease in employment of 2.1%. Vodopivec and Ducel found, based on simple analyses of tax wedge, that lower tax wedge corresponds to lower employment rates and higher unemployment rates. Empirical evidence shows rather negative impact of labour taxes on employment but with different magnitude for different groups of workers. Further, a study by Góra et al. (*2006*), using panel regressions for OECD countries, provided evidence that employment rates of low-skilled workers are heavily affected by tax wedge while there is no effect on skilled workers.

Taxes, seen as a distortion in the labour market affecting both the labour supply and demand, impact the level of employment and wages, depending not only on the level of taxation, but also on other factors such as institutional set up in the wage bargaining process, labour market structure, etc.

General fiscal strategy in BH *(government expenditure accounted for close to 50% of GDP, well above average of EU27)* increasingly relies on revenues from indirect taxes *(indirect tax revenues account for more than 50%f total tax revenues*[13]) on the one hand, and on revenues from social security contributions (SSC) as a predominant form of wage taxation, on the other *(general government data, revenue from SSC: 14% GDP in 2006*[14]*).* Revenues from SSC as a share in GDP for BH are in line with international standards *(data for 2006*[15]*: 13.8% GDP for EU15 and 13.7% GDP for EU27)* but not at the per capita levels. Social security funds in BH are reliying in 95%[16] *(for all three funds: pension, health and unemployment insurance funds, for both entities)* on revenues from social security contributions paid by the present generations of workers, where most of the revenues are paid out to current beneficiaries. BH and most of the SEE countries rest heavily on the revenues from social security contributions in financing social security benefits.

[13] MOFTER (2008).

[14] IMF. (2007).

[15] EC (2007b).

[16] Self calculations using data from MTEF FBH, RS 2008-2010

Under current level of labour costs, there is a related concern over financing the social security benefits (pension, health and unemployment insurance) in a financially sustainable manner. The taxation of labour additionaly gains on importance due to demographic trends of ageing, which raise many issues and challenges in terms of structure of taxation. „The economic impact of ageing will be severe and diverse[17]: productivity will become the predominant source of growth because of a shrinking working-age population leading (with unchanged policies) to a fall in potential growth rates". A key challenge will be to develop labour market policies and reforms in the tax and benefit systems aimed at increasing labour supply and further reforms of the welfare state that guarantee the long-term sustainability of public finances in the face of these demographic developments.

[17] Carone et al. (2005)

Recent findings on labour taxation in BH

Despite the fact that there is a great number of empirical studies on labour costs, composition and its impact on labour market and employment levels, the literature on the impact of labour costs, better say tax wedge, as well as on employment or unemployment in the transition countries is limited. In general, labour costs are frequently blamed for contributing to growth of informal sector *(resulting in lower formal and an increase in informal sector employment)*. Nickell and De Haan *(2003)*, summarizing the results of empirical studies on the OECD countries, found that most of the analyses show a negative relationship between tax wedge and employment, however, with differing elasticity, ranging from -0.55% *(Daveri and Tabellini, 2000)* to -0.11% (*Nickel et al., 2003*). Another measure of tax burden on labour is **implicit tax rate** (ITR)[18]. Estimates (*Arandarenko and Vukojević, 2008*) show a level of 38.7% for BH (2005), which is higher than the EU-27 average (36.2%[19] in 2005) but lower than in Albania (44%), and higher than Macedonia (35%). Moreover, Arandarenko and Vukojevic (*2008*) argue that žonce the Western Balkan countries enter a more stable development path, the relatively high tax wedge levels will have a significant negative effect on labour demand (*particularly of low-wage labour*) in the formal sector.

[18] The implicit tax rate (ITR) on employed labour is defined as the sum of all direct and indirect taxes and employees' and employers' social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory increased by taxes on wage bill and payroll.

[19] Eurostat (2007)

Recent findings on the level of labour cots and its comparison within Western Balkan region follow in Table 1. Labour costs (*see Table 1*) in period 2001-2006, where the highest were in FBH and the lowest in RS *(employing labour have cost 523 EUR in 2006)*, with the lowest growth in FBH *(both in nominal and real terms)*. The tax wedge in BH is much more affected by social security contributions than by personal income tax (*Arandarenko 2007*), resulting in a heavy burden on low wage workers and workers with dependents. A very significant feature of labour tax regime is an absence of deductions, credits and wage-varying rates, which, as a consequence, results in an absence of progressivity (for single persons) of labour income. Therefore, workers with dependents face the same tax wedge as single persons. The labour costs in the Western Balkan countries (386 EUR in 2005) are more in line with the two newest EU member states (average labour costs of NMS was 800 EUR in 2005).

Table 1:
Labour costs in 5 Western Balkan countries at average wage and growth rate of labour costs per employee

	2001	2002	2003	2004	2005	2006
Labor costs (EUR) Without fringe benefits						
BH-FBH*	389	418	454	462	483	523
BH-RS	241	270	295	330	362	406
Serbia	176	262	306	332	362	445
Montenegro*	204	224	315	352	379	438
Macedonia*	291	270	295	330	362	406
Albania	140	152	164	181	196	201
Average wage	260	297	339	362	386	436
LC per employee (growth rate – nominal), (in %)						
BH-FBH	-	7.5	8.6	1.8	4.5	8.2
BH-RS	-	12.3	9.2	11.6	9.9	12.0
Serbia	-	48.9	16.8	8.5	9.0	22.9
Montenegro	-	9.7	40.4	11.7	7.8	15.6
Macedonia	-	6.2	4.4	3.8	2.5	7.7
Western Balkan average	-	13.5	13.5	7.3	6.7	12.0
LC per employee (growth rate – real), (in %)						
BH-FBH	-	7.7	8.5	2.1	1.5	0.8
BH-RS	-	10.2	7.3	9.8	4.3	4.4
Serbia	-	30.3	13.9	8.7	7.2	11.7
Montenegro	-	8.6	14.9	9.1	5.3	12.2
Macedonia	-	4.4	3.8	4.3	1.8	4.3
Western Balkan average	-	11.2	9.7	5.6	3.8	5.5

Source: Arandarenko (2008)
**non taxable "fringe" benefits are not included but increase the level of labour cost.*

In addition, calculation of labour costs depends on the level of average wages used in calculation. The current data sources (RAD survey on monthly basis, harmonized between the entities) that was used for estimating the wage levels suffered from a deteriorating coverage and response rate, which generate **wage estimates** increasingly upward biased (an *over-estimation of wage growth, where true wages are expected to be lower than the published ones, public and social sector over-represented, and small firms and self-proprietorships not accounted for*[20]*)*.

[20] Arandarenko (2008)

In the past, the personal income tax (PIT) regimes have received much more attention from policy makers in BH, where social security regime has remained largely unchanged except for occasional changes in the statutory rates, despite the fact that these contributions account for much higher share of revenues than it is the case with personal income tax *(see Picture 1).* New amendments to the entity legislation on social security came into force on 1 January 2009, bringing changes in the statutory SSC rates. In the Federation of BH, the social security contribution rates *(paid both by employers and employees)* were reduced from the level of 45% to the level 41.5% in 2009 (these changes occurred in 2001, with their reduction by 1.5 percentage points, which was followed by a 2 percentage points in 2009). In RS, SSC rates were reduced from 42% on the net wage to 30.6% on the gross wage.

The PIT rates are competitive and among the lowest in EU. In 2008, FBH Government increased the PIT rates from 5% to 10%. RS started reforming income tax earlier, in 2007, by reducing the PIT rate to 8% *(although the first version anticipated the rate of 10% that could have harmonized the entity PIT rates and abolished progressive PIT rates of 10% and 15%)* and introducing tax deduction in the amount of 12 minimum monthly wages. New RS Law on PIT introduced the gross wage as a taxable basis (the same as in FBH). Both PIT laws of wage taxation, especially in the Federation of BH, where each canton had its own provisions. Various sources *(OECD 2004*[21]*, IMF, the World Bank, and the EC*) have recommended to BH to follow the trend of reduction of its tax wedge on labour with the aim of reduction of the major obstacle to job creation and people's willingness to work.

[21] OECD (2004)

Financing benefits of social security in BH

Social benefits in BH are tightly linked to contributions, which are fully paid out of the wage employment. Social security is the entity level policy and comprises compulsory health, pension and unemployment insurance. Entity laws on social security contributions regulate the systems of compulsory contributions, as the main instruments of financing pension/disability, health and unemployment insurance. The law in FBH sets the **ceilings** for contribution rates (*where contribution rates are further determined by competent institutions*), **minimum tax bases** that cannot go below the lowest wage determined by the General Collective Agreement (GCA); the **gross wage** as a taxable basis in both entities (*RS previously used the net wage; for definition, see Box 1*); the **scope of social insurance** (*child protection was part of social security contribution in RS but not in FBH*); **SSC levies** (*in FBH on both employer and employee; in RS only on employer*); **financing mechanism** of insurance benefits (*social insurance funds in RS are heavily financed from the budget, which is not the case in FBH)* etc. In the past, these differences caused difficulties in interpreting the level of labour costs and tax wedges in, and between, the entities.

Box 1. Definition of net and gross wage
„**Net wage**" in RS is defined as individual's take home wage which includes fringe benefits (such as hot meal allowance, transport costs etc.) all taxable. Employer contributions and income tax were levied on net wage plus fringe benefits and are passed fom employer directlu to authorities. Statistics report on net wages excluding social security contributions.
„**Gross wage**" in Federation reffers to employee's wage excluding fringe benefits (hot meal allowance, etc.) plus the employee's share in social security contributions and income tax of 5%. With new law on PIT the tax rate was increased to 10%. Fringe benefits are not taxable. The statistics report on net wages.

The SSC rates are considered high and a key factor (*share of SSC in total labor costs is around 30% in RS and 38% in FBH, see Annex table 2 and 3*) for high labor costs in BH (*labor costs in BH are among the highest in the Western Balkan region ranging from 200 EUR in Albania to 423 EUR in BH*[22]).

[22] Arandarenko (2008)

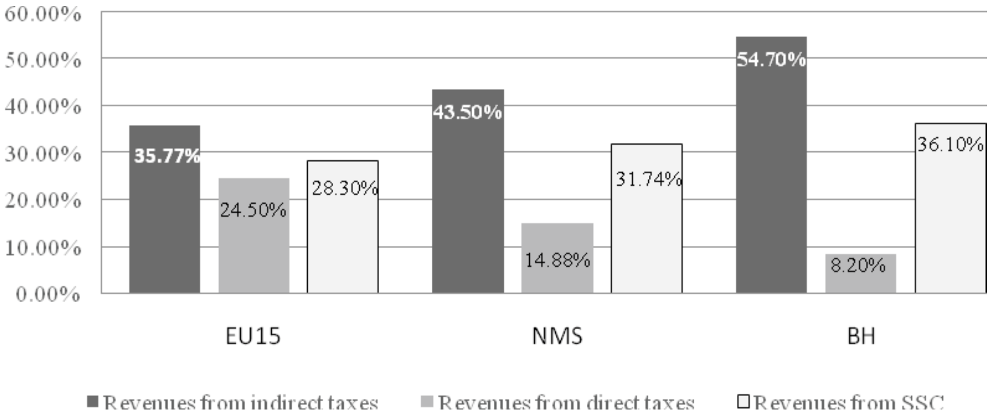
Social security contribution rates (in %)	Federation BH			Republic Srpska	
Tax base	gross wages			net wages	
Fringe benefits	Non taxable (trasport and hot meal allowance etc)			Taxable ((trasport and hot meal allowance etc)	
PIT	Flat rate 10%, no zero brackets, deduction 300 KM, tax exempt fringe benefits			Flat rate 8%, no zero brackets, deductions 300 KM, no tax exempt fringe benefits	
Payed by	Employer and employee			Employer	
	Total	Employer	Employee	Total	Employer
Pension and disability insurance	23.0	6.0	17.0	17.0	17.0
Health insurance	16.5	4.0	12.5	11.5	11.5
Unemployment insurance	2.0	0.5	1.5	0.7	0.7
Child „allowance"	-	-	-	1.4	1.4
Total SSC	41.5%	10.5%	31.0%	30%	30%
Personal income tax (PIT)	10%			8%	
Total tax	51.5%			38.0%	

Source: Law on Contribution FBH and RS

Table 2:
Social security contribution and PIT rules in entities

Such high labour costs are linked to the tax evasion and size of informal economy as a consequence *(through underreporting of wages, not registering workers, etc.)*. For BH, there are various estimate of the size of informal economy. According to available data (*LFS 2006)*, the size of **informal sector economy** is estimated at the level of 34%, including all the employed persons, but not covered by health or pensions insurance. In addition, the World Bank and IMF estimate the size to be around 30-40% of the official GDP. Such a large size of informal economy is a characteristic of transition countries, which is explained as the inability of unskilled laid-off workers to reintegrate in the labour market, high level of labour taxation which leads to tax evasion, etc. Employers strongly underreport their wages *(higher paid workers are reported in lower wage categories, thus reported wages exaggerate the number of workers who were paid the minimum wage)* in order to avoid, or to minimize, the payment of social security contributions.

General fiscal strategy in BH relies increasingly on revenues from indirect taxes and social security contribution (SSC), as a predominant form of wage taxation, which is more in line with NMS (*see Picture 1*). Revenues from social security contributions are second most important revenues source in both entities. Picture 1 shows different tax policy between old and new member states where old member states have more equalized levels of revenue sources between consumption and labour.



Picture 1:
Share of revenues from indirect, direct taxes and social security contributions in total tax revenues in 2006 for EU Countries and 2008 for BH

Source: Tax trends in EU (2008), Medium term expenditure framework for FBH, RS, BH (2008/2010, 2009/2011)

Revenues from social security contribution accounted *(general government data)* 14,3% GDP in 2006 *(see Table 3)* above the level of EU-27 *(10.95 % GDP where 11.2% of the GDP in EU-15, and 13.7% of the GDP for EU-27 in 2006[23])*, but not at the per capita level *(as in the case of healthcare spending; see the section on Healthcare policy and labour costs)*. Although the revenues from SSC take a high share of GDP, with low level of per capita income these revenues are still insufficient to cover the basic healthcare and living standard of the beneficiaries. Further, the revenues from SSC show a continuous increase in nominal terms (as in % GDP in FBH) in the period 2006-2008 *(see Table 3)*. In 2008 alone, the revenues from SSC grew by 21.8% (*DEP*) in FBH and 29.8% in RS, where wages increased by 13.4%[24] in FBH (29.1% in RS) and employment levels grew by some 4% on average, which can be linked to greater fiscal discipline than anything else.

[23] EC (2008)

[24] DEP (2008)

Table 3:
Entity's tax revenues

(in mil)	2006		2007		2008	
	FBH	**RS**	**FBH**	**RS**	**FBH**	**RS**
Indirect taxes	2.372	1019	2.630	1.271	2.855	1.324
Social security contributions	1.803	756	2.106	818	2.327	948
Direct taxes	410	330	473	285	503	327
Total taxes	4.585	2.105	5.209	2.374	5.685	2.599
Indirect taxes in total taxes (%)	51,7	48,4	50,5	53,5	50,2	50,9
SSC in total taxes (%)	39,3	35,9	40,4	34,5	40,9	36,5
Direct taxes in total taxes (%)	8,9	15,7	9,1	12	8,8	9,1
SSC revenues as % GDP	14.8	11.6	15.3	11.1	-	-
Direct revenues as % GDP	3.4	5,1	3.4	3.9		

Source: MTEF FBH and RS for years 2008-2010, 2009-2011, Data for GDP, entity statistics National Accounts

Under assumption that progres will be made in establishing the system of single tax collection within entity's tax authorities (expected to start with january 2010), the further increase of tax revenues from SSC can be expected. Still, total statutory social contribution rates in FBH are high in comparison with EU countries, especially with those with similar level of personal income tax rate. Entity PIT rates are competitive with much lower share of revenues in GDP *(e.g. share of direct taxes in GDP in 2007 was 3.4% in FBH and 3.9% in RS*) when compared with average for EU15 (10% GDP) or NMS (4.9% GDP). For share of SSC (DT) revenues in total tax revenues see Table 3.

Social security funds *(pension, health and unemployment insurance funds, in both entities)* are relaying on revenues from social security contributions (*SSC make 95%*[25] *on funds revenues*) paid from present generations of workers; most of revenues being paid out to current beneficiaries in all three funds. In terms of provision of social security benefits, majority of countries[26] where pay-as-you go "PAYG" systems have been used have painfully experienced the accumulation of huge deficits jeopardizing the fund's financial viability *(but some authors view rather poor economic performance than PAYG system as a problem).* This left many countries with the painful decision to either rationalize social security benefits or default on their obligations altogether which is an unviable option.

[25] World Bank (2004b).

[26] Ibid

The possibility of widening the tax base through reduction of labour costs *(namely, SSC for health and pension insurance)* are discussed in the text that follows. Under current conditions, fiscal space is limited. Both systems operate under pay-as-you-go scheme (PAYG) and face significant difficulties in providing compulsory benefits and maintaining financial balance. In most countries where defined benefits for pension and universal health insurance are provided under PAYG scheme (*Navarro 2004*), benefits usually tend to exceed the sum of contributions. As the imbalances become wider, social security institutions find it extremely difficult to maintain their medium- to long-term financial equilibrium and, in many cases, they are already in financial distress and may run out of funds needed to meet the benefits-related demands in the near future.

Taking into account financial situation of health and pension funds primarily in the Federation of BH (*and for comparison reason with the present data for RS*), we will look at the possibilities of reducing the contribution rates thus lowering the labour costs. Although, both the economic theory and EU experience confirm that the measures of reducing tax rates by broadening tax base can reduce financial burden on employers and consequently increase productivity and formal sector employment, it is still unclear whether this option is feasible for BH and especially for FBH.

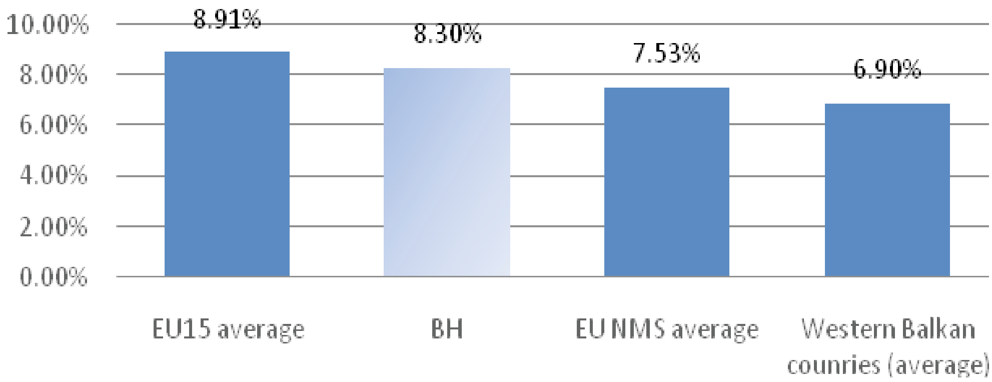
Health care policy and labour costs

The obligatory health insurance is based on principal of intergenarational solidarity of contributors within cantons. These rights are materialized, in FBH, through cantonal health insurance funds based on social security contributions on health insurance, presenting (*i.e. compulsory social security contribution paid by employer and employee)* a major source of financing the health care *(makes 95% of public sector resources*[27]). Most of the public expenditure from health insurance flow through the health insurance funds, including the resources collected through SSC, transfer to health insurance funds from other extrabudgetary funds (*pension and*

[27] WHO National Health accounts

unemployment funds cover health insurance of pensioniers and unemployed) and budgetary transfer (*the relevant law foresees budgetary support by cantonal or local governments when health insurance funds lack resources to cover the entitlements arising from obligatory health insurance)*. Budgetary transfers differ among the cantons in the FBH and generally are in decline.

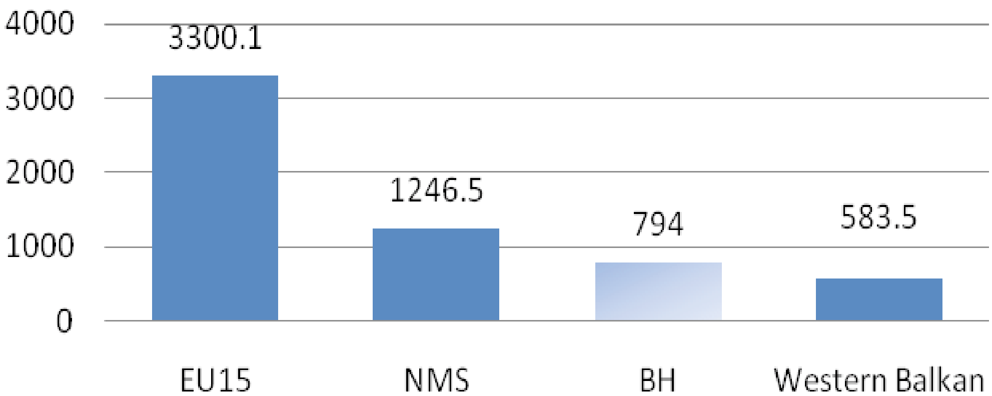
The expenditure on healthcare in BH *(see Picture 2*) amounts to 8.3% of the GDP in 2006 and tend to be more in line with EU15 (old member states) and new member states (NMS), however, they are above the average amounts reported for the Western Balkan countries. This high level of expenditure is mainly influenced by private out-of-pocket expenditure where public expenditure remains rather low. However, due to low per capita income levels, such high levels of expenditures on healthcare as a share in GDP are translated into low levels of per capita expenditure (*see Picture 2*). Translated in the USD values in PPP, the per capita expenditure on health in BH is much lower than the levels in EU15 and NMS, however, they are still above the average values for the Western Balkan countries.



Picture 2:
Expenditure on health care as % GDP in 2006

Source: World Health Organization statistical information system (WHOSIS)

Although the current per capita expenditure on health is low, it appears that fiscal space for additional expenditures on health is needed but very limited (*Bredenkamp, Grangolat*). Although improvements have been made in recent years in the healthcare sector, the healthcare institutions in both entities are still running deficits due to accumulated debts to their suppliers in the amount of 0.5% of the GDP in FBH and 1.9% of the GDP in RS, which was registered in 2004 *(Langenbrunner et al*).



Picture 3:
Per capita total expenditure on health (PPP in USD), 2006

Source: World Health Organization statistical information system (WHOSIS)

The contribution rate for health insurance is set at 16.5% in FBH and 11,5% in RS, which is rather high (*especially in FBH*) when compared with other Western Balkan countries *(Macedonia 9.2%, Serbia 15.9%, Slovenia 13.25%, and Croatia 15%)* and lacks necessary harmonization not only between the entities but also between the cantons in the FBH. The FBH Government has decreased the contribution rates for health insurance by 1.5 percentage points in the period 1998-2009 *(1% from contributions paid by employer and 0.5 percentage points on contributions paid by employee),* but the effects of these reductions have not been seen, neither in higher revenues, nor in employment levels *(there is no empirical evidence at least)*. The Federal Government *(outlined in the FBH Government Program for 2008-2010)* has continued reducing the contribution rates for health insurance (0.5 percentage points in 2009), yet no supporting evidence has been found to explain the policy expectations in regard to projected revenues, employment levels or increased per capita spending on health *(the RS Government has also reduced these rates by 3.5 percentage points in the period 2004-2008)*. In the case of FBH, it was a rather political decision. Furthermore, despite the ceilings set for the statutory contribution rate in FBH (16.5% on gross wage), for great share of categories of insured persons *(such as agricultural workers, unemployed, disabled, civil war victims etc.)* these rates (*usually lower*) are further set by cantonal health insurance funds (*and adopted by cantonal legislative bodies*). E.g., the Federal Government has adopted a decision on contribution rate for pensioners in the amount of 1.2%, which is much less than for employed persons *(considering that this population is a major user of the healthcare services)*, which is equal for all cantons. In order to provide a more fair system of healthcare, harmonization of different rates and taxable bases *(taxable bases are also subject to different definitions by cantonal government)*, which are set by cantons, is desirable in the Federation of BH. In addition, with the signing of SAA, BH has committed itself to harmonize its legislative framework with the EU provisions *(in line with the Decision on Procedures and Practices of Harmonization of BH Laws with Acquis Communitaire).*

Considering above facts there is a justified need for increased spending in health sector. The challenges in FBH (but RS as well) remain in securing lacking resources for equal financing of basic health packages in all cantons but the tax base is low with contributors to beneficiary ratio of 1:4.8 higher then in other Western Balkan countries[28]. Thus, increase of SSC on health insurance would not be an option because it would increase the increase tax burden on labour, unemployment levels, reduce competitiveness, deter further potential investments all being politicaly inacceptable. In theory, higher taxes would be shifted on employee. In praxis, especially in the countries where product and labour market are not very competitive, employers may not be able to reduce wages to compensate for an increase of tax burden *(Gottret and Schieber 2006)*. There are proposals in direction of financing the healthcare in FBH through subsidies on the costs of VAT, as well as excises on cigarettes and alcohol *(which are harmful for health)* directing them to social and health programs, but no further analyses has been provided. However, a decline in VAT revenues should be taken into consideration here. *The potential of increasing other tax rates on behalf of reducing SSC on health insurance should be reviewed.* There is a justified[29] fear that every further reduction in health contribution rates could harm the current financial situation and cause financial difficulties to the health sector in the Federation of BH.

[28] WHO (2007)

[29] Ministry of health FBH. (2008)

Pension policy and labour costs

The pension system in BH is under the responsibility of entity governments. The Law on Pension and Disability Insurance (adopted in 1998 in FBH and in 2000 in RS) is based on the principle of intergenerational solidarity, the so-called „Bismarckian system" and implies obligatory payment to pension insurance funds by employed persons, subject to current reforms in both entities. This type of insurance covers the risks of old age, disability and death and the corresponding rights for old age, disability and survivor pension.

The pension system in BH was created on the basis of social insurance system inherited from the former Yugoslavia. After the war in BH, both entities continued with identical practice of pension system, despite the fact that it lost the key factor, i.e., high rate of formal employment which was a crucial element of sustainability of the pre-war pension system.

In comparison to pre war situation, where the ratio of contributors to pensioniers was 3:1 in 1991, this ratio declined over time to the level of 1.46 in 2008 and, according to Bismarckian model, it can no longer be counted as sustainable. A consequence of such a trend, the costs for pension and disability insurance have increased to the level of 23% *(17% employee based and 6% employer based)* in FBH, and 17% in RS. Such rates are considered as high *(World Bank)* and seen as an obstacle for the generation of new jobs. They influence the level of labour costs and the incentives for employers to operate within informal economy, while they exclude self-employed persons and agricultural workers from the pension system.

High contribution rates are common for the countries in transition due to sharp reduction in the levels of formal sector employment, which encourage governments to raise the SSC rates in order to compensate for the loss of revenues. The level of total contribution rates in BH, especially in FBH *(see Annex- Table* 4) compared to EU countries *(average at 23.6%)* is among the highest. Consider that Bosnia is viewed as a younger country, with ratio of elderly 65+ to the total population of only 15.1%, while the average in OECD countries is 19%[30]. However, the lack of harmonization of overall contribution rates in the entities is an issue in itself.

[30] Schwarz (2008)

Table 4:
Pension system in BH and main indicators

	2007	2008	2009	2028
Number of pensioniers	326.359	335.073	344.019	567.559
Number of contributors	475.109	489.505	504.337	889.263
Expenditure on pensions (in .000)	1.145.824	1.279.083	1.427.841	11.570.025
Average pension	299,88	330,17	363,52	-
Average wage	696.74	741.12	788.33	-
Ratio of pension to average wage (%)	43,04	44,53	46,08	-
Ratio of contributors/pensioniers (SDR)	1.45	1.46	1.47	1.57

Source: WB pension system note

The key indicators of the pension system in BH are presented in Table 4. The **system dependency ratio** (SDR)[31], i.e., the ratio between contributors and pensioners, (62.95%[32] in FBH and 59.1% in RS) shows an extremely low level (*see Annex, Table 6 for international comparison*) of the formally employed population financing the growing population of pensioners. Thus, one contributor or one formally employed person finances 1,46 pensioners. The ratio between contributors and pensioners is among the lowest in the region, where only Bulgaria and Hungary show lower ratio *(see Table 5).* The second indicator, i.e., the **old age dependency ratio** (PDR), provides information on the share of people 65+ in the working age population in BH and amounts 15.5% both in FBH and RS. In OECD countries SDR is usually twice the PDR while it is about 4 times the PDR in BH.

[31] Ratio between the number of users and number of contributors

[32] World Bank.(2007)

Tabela 5:
Comparative overview of system dependency ratios (SDR)

	BH	Serbia	Albania	Croatia	Romania	Bulgaria	Slovenia	Hungary
Employed (in mil)	0.62	3.13	0.93	1.56	9.16	2.92	0.80	3.90
Pensioners (in mil)	0.484	1.601	0.558	1.014	4.610	2.328	0.504	3.052
Ratio of contributors to pensioners	1.29:1	1.96:1	1.67:1	1.54:1	1.99:1	1.25:1	1.59:1	1.28:1

Table 6:
The structure of pensions in the region

	Old age pension	Survivor pension	Early retirement
FBH	44.02%	33.7%	22.3%
Albanija	80.3 %	5.6 %	14.1 %
Slovenija	66.1 %	2.9 %	31 %
Mađarska	75.0 %	3.1 %	21.9 %
EU-15	76.0 %	9.8 %	13.2 %

Source: Pension and disability insurance funds in FBH and RS, Eurostat, Albanian national statistical institute

Table 6 gives an overview of the current pension systems in BH which are much more affected by the level of survivor pensions and early retirement than by the old age pension which have the lowest share and are almost two times lower that in the countries of the region and of EU. The prevalence of **early retirement** is seen as an additional problem for to the pension funds, since these individuals receive their pensions longer than the persons who get retired at standard age.

Tabela 7:
Revenues from SSC and expenditure on pension insurance in FBH

	Revenues from SSC on pension insurance	Expenditure	Index of revenue growth
2002	691.873.780	666.490.747	100.00
2003	730.843.664	684.204.392	105.63
2004	801.260.090	749.958.985	109.63
2005	851.561.055	840.281.307	106.28
2006	980.148.744	931.314.004	115.10
2007	1.149.282.319	1.145.823.959	117.26

Source: Federal pension and disabilityinsurance fund, 2007

Financial situation of the pension funds is currently balanced solely due to the „revenue constrained spending limits" in FBH, whereas the RS pensions (especially military, early retirement and minimum pensions) are heavily financed from the budget. Such pensions systems are not sustainable in the long run (World Bank 2007) [33] because they project to pay low benefits in the future to its high contribution rates today.

[33] Ibid

In addition, due to revenues constraints, pensioners in FBH are not paid at the full rate although, by law, pensions should grow in parallel with the growth of wages. However, depending on the revenues in a particular year, all pensions are to be increased or reduced by the same percentage in order to equate revenues with expenditures. This puts pensioners in an unequal position because a person with pension awarded years ago will have different growths (reductions) in pension amount than those who retired a year ago. This is seen as a product of indexation, which is a parameter that tends to raise the costs thus making it difficult to reduce the contribution rates (*Schwarz*). In respect to this indexation of pensions, the countries in the region index their pensions according to their inflation rates, just like most of the OECD countries. Only Bosnia has an odd way of indexing pensions; by law, pensions should grow alongside wages, but, given the revenue constraint, they grow in a non-systematic way, often even failing to protect the system against inflation.

The level of average pension compared with the poverty level in the country explains the living standard of pensioners under current pension system. The poverty rate in 2007 amounts to 2857.31 KM annually, or 238.11 KM monthly. Both average and minimum pensions in the entities *(in FBH, some 42.5% persons[34] receive minimum pensions, while in RS their share is only 10%)* are near the poverty line, which means that the current system is unable to provide for a decent living for majority of its pensioners. Only 0.162% persons receive the maximum pension of 1263.9 KM. The level of pensions received is not directly correlated with social security contributions. There is a missing link between paid contributions and the amount of received pensions. Benefits are not perceived by insurer, while the cost of today does not provide the expected benefits of tomorrow. Contributions are seen as an entrance to pension benefits, but the size of pension is not linked to the level of contributions paid.

[34] PIO FBH (2008)

Labour costs and its decomposition in the context of BH

There is a large body of literature suggesting that high levels of labour costs may have detrimental effects on growth and employment/unemployment (*Daveri and Tabellini, 2000; Haltiwanger et al., 2003; Nickel, 2003; Bassanini and Duval, 2006*). By contrast, studies focusing on Bosnia and Herzegovina and even on the Western Balkan countries are rare, mostly due to the lack of data.

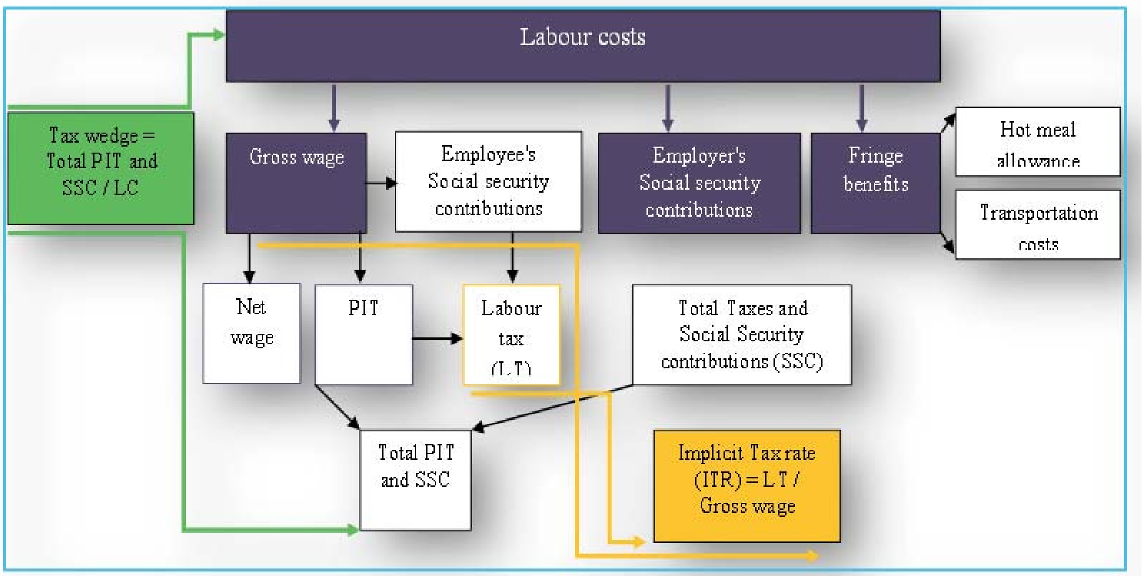
Labour costs are seen as the costs incurred by employer in the employment of labour. Statistics of labour costs are based on the concept of labour costs as a cost to an employer, rather than from the perspective of earnings to an employee. Labour costs (*Commission Regulation (EC) No 1726/1999, Annex 2, in line with international definition of ILO, 1966*) comprises of following (the broader definition of labour costs):

1. Compensation of employee which consists of:
- **Wages and salaries**; (which include direct remuneration, bonuses and allowances, payments to employees saving scheme, for days not worked and wages and salaries in kind)
- **Employers' social security expenditures**

2. Cost to the employer for vocational training
3. Other expenditure paid by employers such as recruitment costs, working clothes provided by employer
4. Taxes paid by the employer
5. Subsidies recieved by the employer

According to this definition, the concept of labour cost is broader than the compensation of employees as it includes expenditure on welfare services, training and other miscellaneous costs including work clothes and taxes on employment. In the absence of statistical data on labour cost index, the following picture presents a simplified version of labour cost definition used in this study to approximate and compare the level of labour costs in BH with those in EU countries. *Picture 1* presents two main components of labour costs: wages *(gross and net wages)* and total tax on labour *(income tax and social security contributions paid by employer and/or employee)* as well as relevant indicators measuring labour costs.

Picture 3:
Labour costs, its components and relevant labour costs indicators

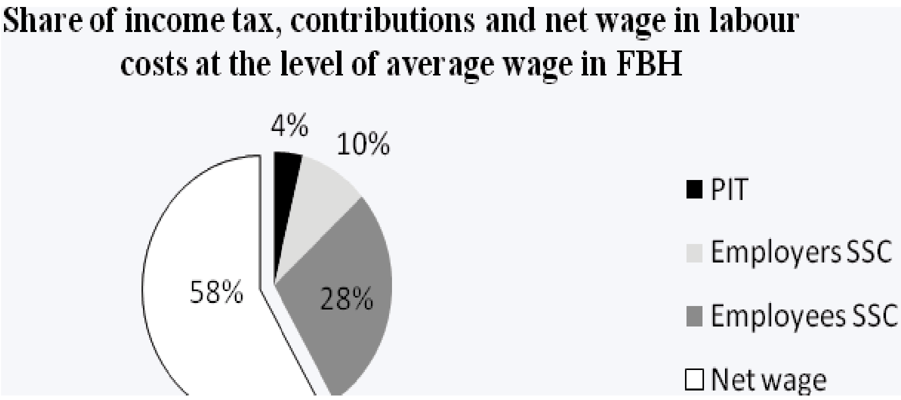


Definitions:

Labour costs	Gross wage earnings plus employerrs social security contributions and payroll taxes
Tax wedge	Sum of personal income tax and employee plus employer social security contributions together with any payroll tax, expressed as a percentage of labour costs
Personal income tax (PIT)	Tax on wage (gross in Federation)
Social security contributions (SSC)	Contributions paid by employer and employee in FBH, empoyer in RS
ITR - Implicit tax rate	The implicit tax rate (ITR) on employed labour is defined as the sum of all direct and indirect taxes and employees' and employers' social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory increased by taxes on wage bill and payroll.
LT – Labour taxes	Total taxes on labour comprising of PIT and employee's SSC
Personal average tax rate	Personal income tax plus employees social security contributions expressed as a percentage of gross wage earnings
Net take home pay	Gross wage earnings less personal income tax and employees social security contributions, plus cash transfers received from general government

There are currently no statistical data **on labour costs in BH produced in line with the Eurostat methodology** that would allow comparison of labour costs with the EU levels. The statistical agencies in BH have developed a Labour Cost Survey in 2009 as a pilot survey that needs to be further developed, taking into account the EC Regulations on labour costs calculation[35]. It is expected that more reliable data on wages and labour costs will be produced, and thus remedy the difficulties produced in the wage level estimation.

Labour costs (LC) differ between the entities and, in FBH, they comprise gross wage *(net wage, employee's social security contributions - SSC, and personal income tax - PIT)*, employer's social security contributions and (*non taxable*) fringe benefits *(including hot meal allowance, transportation costs etc.).* The following picture illustrates the share of total taxes in labour costs. Apart from wages, which constitute 58% of labour costs, SSC takes the largest part (*28% of labour costs*). At the average monthly wage of 750 KM, labour costs incurred by employer in FBH amount to 1282.9 KM, if fringe benefits are not included, otherwise app. 1582.9 KM per month.



Picture 4:
Share of income tax, contributions and net wage in labour costs at the average wage level in FBH in 2009

[35] EC Regulation No 450/2003 of the European Parliament and of the Council concerning the labour cost index; EC Regulation No 1216/2003 implementing EC Regulation No 450/230 of the European Parliament and of the Council concerning the labour cost index; EC Regulation No 530/1999 concerning structural statistics on earnings and labour costs.

In the next section, changes that occur in wage taxation *(tax wedge, total tax burden on net and gross wages)* are discussed and compared with EU levels. Two recent policy scenarios are taken into account, with tables of calculation of total tax burden on wages presented in Annex (*Tables 1, 2 and 3*) for both the BH entities. For calculation purposes, average net wage of 751 KM (*average for 2008*) is taken in order to compare the level of labour costs between the entities. Table 1 refers to the calculation of labour costs and tax burden on wages prior to the changes made in 2008 in FBH, while Tables 2 and 3 account for the policy changes in introduced in 2008 in both entities. The calculation of total labour costs in all the three tables is presented for a single person with no dependents (*and with personal deduction only in 2008*).

In both entitles new laws on personal income tax came into force on 1 January 2009, alongside the amendments to the Law on Social Security Contributions in both entities. The reform of personal income taxations started in 2007 in RS, where progressive system of personal taxation was introduced, with rates of 10% and 15%, and tax deduction of 12 minimum annual wages. The latest amendments in RS (entered into force on 1 January 2009) reduced the PIT rate to 8% and abolished the progressive rate of 15%. The PIT rates in FBH have been changed from 5% to 10%. Although some harmonization between the entities has been achieved in terms of gross wage calculation and tax deductions, the tax rates have remained different.

Prior to the policy change introduced in 2008, the labour tax wedge, i.e., the ratio between total labour taxes and labour costs were considered high for Federation BH, especially when compared to the Western Balkan countries and were constant across the wage levels (42,1% in FBH). Therefore, a worker with dependents faced almost the same tax wedge as a single person with no dependents. This was explained by the lack of progressivity of taxation of labour income, due to the absence of deductions, credits and wage varying rates.

In Table 9, a comparison of tax wedge is given for BH entities and EU countries (*under assumption of single earner without children*). The tax wedge (*at average wage level*) is 41.5% in FBH and 34.1% in RS on gross wage. This is in line with the tax burden in the region except for Slovenia as the country with the highest tax burden on labour (48.2% of gross wage) and Albania with only 29.8%. According to this data, labour costs in RS are more competitive than in FBH, but heavy budgetary support to the RS pension fund needs to be taken into account in this calculation *(22% of total revenues of RS pension fund is financed through the budget in 2008).*

Table 9 shows the composition of tax wedge across EU countries. Most of the EU countries (not all NMS are included) impose contributions both on employer and employee. The composition of labour tax, particularly depending on whether SSC are paid by employer or employee *(Norregaard, J. and Khan, T. S.)* is considered important if workers-value benefits they expect to receive from payment of SSC. Depending on worker's perception of future benefits, lower after tax wage will be viewed either as mandatory saving, if there is a close link between benefits and contributions, and if benefit/outcome cannot be achieved at lower costs through other means.

Prior to the policy changes, tax burden on net wage was the same for all wage levels (72.6%) in FBH. The low-skilled labour bears the same tax burden as the highly skilled labour. The policy changes, done in 2008, have introduced a certain progressivity in the tax burden towards higher wages. Tax burden has been reduced for up to the average wage level, while it increases for above the level of average wages. It implies that skilled labour is now more expensive as before. Now, highly skilled labour, at the level of managerial wages (app. 6 times the average wage, or at 4500 net wage), bears 77% of total tax (4.3 percentage points more than earlier), while the total tax burden on net wages of low-skilled labour is reduced by 10.2 percentage points. What adds to this progressivity is the introduction of tax deductions, which decreases tax wedge for minimum earners by 3,7 percentage points and increases up to 1,3 percentage points for above-average wage earners. The policy in FBH, which combines increase in PIT rates with tax deductions and decrease in SSC rates have had a positive effect on labour costs on low-skilled or non skilled labour (labour costs for this labour was reduced by 6,67 percentage points) while for above average-wage earners increased up to the level of 2,4 percentage points (see Annex Table 7).

Table 9:
Taxes on labour, tax wedge, employment (ER) and unemployment rate (UR) in EU and BH (2007), for single individual without children at the income level of average wage

	Taxes on labour					Total Tax wedge on labour	ER	UR
	Income tax	Social security contribution		SSC total	Payroll tax			
		Employee	Employer					
Belgium	21.5	10.7	23.3	35	0	55.5	59.7	6.9
Germany	18.4	17.4	16.4	33.8	0	52.2	65.3	8.7
France	9.9	9.6	29.6	39.2	0	49.2	62.2	8.9
Sweden	15.6	5.3	24.5	30	0	45.4	74.9	5.2
Italy	14	7	25	32	0	45.9	55.6	9.1
Austria	12	14	22.6	36.6	0	48.5	68.2	4.9
Denmark	32	11	1	12	0	41.3	76.4	4.3
Finland	18	5.1	19.1	24.2	0	43.7	67.7	9.1
Netherlands	12.1	18.6	13.3	31.9	0	44	74.5	2.6
Luxembourg	13	12.6	11.9	24.5	0	37.5	63.6	2.6
Greece	7.9	12.5	21.9	34.4	0	42.3	56.9	9.8
Spain	18	4.9	23.2	28	0	38.9	59.5	11.4
Portugal	4	9	19	28	0	37.4	68.1	5.4
United Kingdom	16	8.4	9.7	18.1	0	34.1	72,7	5,1
Ireland	7.9	4.7	9.7	14.4	0	22.3	65	4.3
EU15 average				**28.14**		**42.2**	**61.2**	**6.2**
Hungary	16.1	12.6	25.7	38.3	0.3	54,4	56.2	5.8
Slovenia	12.4	18.2	13.2	31,4	4.4	48.2	65.8	5.9
Poland	5.4	20.5	17	37.5	0.6	42.8	51.7	20.3
Czech Republic	7.7	9.3	25.9	35.2	0	42.9	65.7	7.3
Slovak R.	7.1	10.6	20.8	31.4	0	38.5	56.9	18.6
BH-FBH	10	10,5	31	41,5	0	41,5	31,8	25
BH-RS	8	-	30,6	30,6	0	34,1	37,3	20,5

Source: OECD Economic Outlook (2007), Vodopivec, M. and Dolenc, P. Tax wedge on labour: Slovenia vs EU and Oecd Countries, Data for Bosnia based on autors calculation (2009), LFS BH 2008

Tax wedge on labour, prior policy change was constant across all wage levels (42.1% in FBH) regardless on the size of family, number of children, etc. With policy change, the tax wedge on labour decreased by 0.64% pts at the average wage level in FBH. However, tax wedge varies widely across EU countries, exceeding 50% in Belgium, Germany and Hungary for example. In some countries, changes in income tax were offset by changes in social security contributions as it is the case of Federation BH. The policy aimed at reducing the levels of labour taxation varies across countries (EU), so there is no recipe on how to approach the reduction of labour taxation.

More troublesome is the difference in tax wedge between entities amounting to 41.5% in FBH and 34.1% in RS (7.4 percentage points higher in FBH if fringe benefits are not calculated). For employing the same labour at average wage level, labour costs amount to 1.283 KM monthly in FBH, as opposed to only 1.161 KM in RS. If fringe benefits are taken into calculation, then labour in Federation becomes even more expensive. Furthermore, for highly skilled labour (at 4.500 KM net wage), employer will pay almost 8.000 KM on labour costs in FBH, while only 7.011 KM KM in RS.

It is obvious that RS labour tax policy makes labour in that entity more competitive if all other things are kept equal *(same quality of labour force etc.).* However, we need to note that the RS pension fund is heavily supported by the budget as was noted earlier. The effect of the new policy in FBH was that tax wedge increases for the above-average wage levels. However, if fringe benefits are taken into calculation, then the level of labour costs increases while tax wedge decreases. Tax wedge becomes lower, from 24.9% for low income workers to 41.9% for highly skilled labour *(see Table 11)*.

Until now, the study focused on the impact of tax policies on the level of labour costs. It is seen that SSC rate in FBH (not in RS) are above the EU levels. Even for developed countries that have higher income tax than FBH, such a SSC rate would still be high (*see Table 9*). However, not only the tax regime, but also other elements, such as administrative inefficiencies, and wage levels can play important role. Average wage in BH is considered as the highest in the region (385 EUR in BH, while it is higher only Croatia and Montenegro, whereas Serbia, Romania, Macedonia, and Bulgaria have lower wages)[36], with the lowest GDP and the highest unemployment rates. Average wage in BH show continuous increase due to the increase of wages in public sector (wages in public sector grew more than wages in private sector in 2008; 25% vs. 11%), which makes public wages higher for about 41% than those in private sector. In addition, **strong labour unions** *(in the case of FBH)* need to be taken into account because reduction in tax wedge on labour may not lead to an increase in the number of tax payers, but to mere transfer of the effects on net wages without having any effect on employment.

[36] DEP (2009)

Table 10:
Comparison of labour costs and its composition between two policy changes in FBH

	MW		AW		2 AW		4 AW		6 AW	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Gross Wage	531	504	1162	1161	2321	2367	4644	4783	6965	7199
Net Average wage	343	343	751	751	1500	1500	3000	3000	4500	4500
Labour costs	578	567	1266	1283	2529	2616	5058	5285	7586	7955
Tax wedge (%), excluding fringe benefits	42.1	38.41	42.1	41.46	42.1	42.65	42.1	43.23	42.1	43.23
Tax wedge (%), including fringe benefits	28.5	24.9	34.8	33.6	38.45	38.3	40.7	40.9	41.4	41.9
Total tax burden on net wages (%)	72.6	62.37	72.6	70.83	72.6	74.38	72.6	76.16	72.6	76.8

Average wage based on 2008, FBH

2009 (KM)		MW		AW		2 AW		4 AW		6 AW	
		FBH	RS	FBH	RS	FBH	RS	FBH	RS	FBH	RS
Gross Wage		504	500	1161	1161	2367	2312	4783	4661	7199	7011
Net Average wage		**343**	**343**	**751**	**751**	**1500**	**1500**	**3000**	**3000**	**4500**	**4500**
Fringe benefits excluded	Labour costs	557	500	1283	1161	2616	2312	5285	4661	7955	7011
	Tax wedge (%)	38.4	31.4	41.5	34.1	42.7	35.1	43.2	35.6	43.4	35.8
	Total tax burden in net wages (%)	62.4	45.7	70.8	51.7	74.4	54.1	76.2	55.4	76.8	55.8
	PIT + total SSC	213.9	156.8	531.9	395.8	1115.6	811.9	2284.9	1664.1	3454.3	2510.7
Fringe benefits inlcuded	Labour costs	857	500	1583	1161	2916	2312	5585	661	8254	7011
	Tax wedge (%)	24.9	31.4	33.6	34.1	38.3	35.1	40.9	35.6	41.9	35.8

Source: Author's calculations

Table 11:
Comparison of labour costs and its composition between FBH and RS

EU on taxing wages

Tax burden on labour in EU[37] has grown strongly in the period from 1970 to 1990 (from 30% in 1970. to 42% in 1997, as weighted average for EU15), measured as implicit tax on labour (ITR on labour) and mostly related to rising social welfare spending (*especially for pension, healthcare and other social benefits*). Such excessive labour costs prompted initiatives to lower the tax burden on labour-related income, in order to boost labour demand and foster work incentives. The downward trend of labour costs in EU came to a halt in 2005. The policy (very diverse from one country to another) undertaken to reduce the tax burden on labour are presented in Annex for every single EU country including new member states. It is interesting that NMS do not always display low ITR on labour: in three of them, the ITS is above the EU average, where the lowest levels are found in Malta and Cyprus. In most countries, the social security contributions (SSC) account for a greater share of labour tax than personal income tax. But this does not constitute a norm. Denmark, UK and Ireland have higher share of personal income tax in total tax charges (most of welfare spending in Denmark[38] is financed by general taxation).

The labour tax policies vary across EU, where taxes and social security contributions play only a subsidiary role. The aim is not to standardize national systems of compulsory taxes and contributions, but simply to ensure that they are compatible with each other and with the aims of the Treaty on Establishing the Community. Thus, the basic standard-setting instrument is the Council of Europe's European Code on Social Security (with its Protocol and the revised Code) and the European Social Charter. Standardization requires all contracting parties to provide the same minimum benefits to the same categories of population. The European Code on Social Security[39] (ECSS) aims at harmonization of legislation in the field of social security and presents a supra-national European piece of legislation, which will need to be accepted by BH. The Code includes basic principles of social security in Europe and sets minimum standards in the following areas of benefits: medical care, sickness, unemployment, old age, employment injury, maternity, invalidity, survivor, suspension of benefits and the possibility of appeals and

[37] Eurostat.(2008)

[38] Ibid, pp. 9

[39] This document has been prepared with technical assistance of ILO and its concept is based on ILO Convention No. 120 on minimal standards on social security.

financing of social security that can be used for orientation in the ongoing reform process of social security. The minimum standard is obligatory, but left to the individual countries to find their won ways to achieve it. The promotion of ECSS by CoE is aimed at securing the common values in the field of social cohesion in its member states. In general, it is up to individual countries to regulate the domain of the system of social security according to its own circumstances, however, taking minimum standards set by the EU Code on Social Security into account. In addition, those states that have ratified the revised European Social Charter (and having accepted Article 12, Paragraph 2) are obliged to maintain the social security system at a satisfactory level at least equal to the one that is required for the ratification of the European Code of Social Security.

Apart from standard-setting instrument, relative for social security system of the country, there are some institutional requirements that should provide basis for further policy analyses of labour costs. Eurostat, in line with the ILO standards, defines the key components of labour costs comparable between the EU member states, which include compensation of employees (wages and salaries), employers' social security contributions, vocational training costs and employment-related taxes. All the statistical data are based on a harmonized definition of labour costs *(EC Regulation on Labour Cost Survey (see EC Regulations Nos. 530/1999. 1726/1999,452/2000,1737/2005, 698/2006) and the Labour Cost Index (450/2004, 1216/2003 incl. Corrigendum, 224/2007)*. To reach statistical level of labour costs, the statistics in EU produces multi-annual, annual and quarterly statistics, designed to provide a comprehensive and detailed picture of the level, structure and short-term development of labour costs in different sectors of economic activity in EU. EC provides and includes structural information on labour costs, annual labour cost data and quarterly labour cost index (LCI). **Structural information on labour costs** is collected through four-yearly Labour Cost Surveys, which cover detailed structural labour costs data, hours worked and hours paid (LCS collection). All EU Member States participates in this exercise. Available information is broken down by number of employees, economic activity (NACE division) and regions - for larger countries (NACE). Data are collected in most cases by national institutes for statistics. **Annual labour cost data** cover the core variables, i.e., the "average monthly labour costs" and "average hourly labour costs", as well as the breakdown of labour costs by principal categories. **The quarterly Labour Cost Index** (LCI) is a Euro Indicator which measures the cost pressure arising from the production factor "labour". The data covered in the LCI collection relate to total average hourly labour costs and to the labour cost categories "wages and salaries" and "employers' social security contributions plus taxes paid minus subsidies received by the employer. The data are estimated by national institutes for statistics on the basis of available structural and short-term information from samples and administrative records for enterprises of all sizes.

Conclusions and policy recommendations

Empirical studies confirm negative impact of high tax wedge on labour demand in the formal sector, especially for low wage workers. The following can be concluded: The tax wedge in BH is not above the EU levels, but is among the highest. Total taxes on labour in BH are high in international standards due to high rates of SSC, while PIT tax is more in line. Total tax paid on labour differs among entities, thus enabling further development of single economic space within the country, labour mobility and competitiveness of labour. Labour is more expensive in Federation BH than in Republika Srspka, especially if fringe benefits are included in calculation.

Recent policy changes have had a positive effect on low-wage earners (for the levels of wages up to the average wage) where low-skilled or non-skilled labour became cheaper and skilled/highly labor more expensive. Difference in labour costs increasing with higher levels of wages between entities. The tax wedge was reduced for low wage earners (up to the average wage level) and increased for others. Further reduction of labour cost is desired, but fiscal space for such policy is currently lacking. Social insurance funds are not able to carry further reduction of social security contributions, if otherwise alternative model is developed that would replace the potential reduction in revenues. Harmonization of entity tax rates and social contribution rates is desired from the angle of building the single economic space in the country. Recent labour taxation policy in BH have not shown any sign of improvement in levels of employment. The international community strongly advises the government to reduce labour taxes, or, rather, to reduce social security contribution rates in order to bring more people into formal sector employment. However, direct link between decreased contribution rates and increased employment level has not yet been provided in form of analyses. Recent changes, for example, in health insurance contribution rates occurred without any thorough analyses explaining the effects of such policy. Thus, following recommendations are provided:

1. *More detailed analyses of potential fiscal space that could finance the reduction in labour cost, is needed:* If FBH government continues supporting reduction of social security contributions, aiming at lowering the burden on employers caused by high labour costs, alternative model of financing such policy needs to be developed in the form of detailed analyses. Currently, fiscal space for such changes is limited,due to following reasons: On the one hand, there is a significant budget deficit of FBH government in the amount of 130 million EUR in 2008, yet to be financed through drawings from the succession funds of the former Yugoslavia's and loans from domestic commercial banks. On the other hand, tax revenues show decline. The major revenue source (VAT) showed decline (25% of revenues from import tariffs) for the first time since its introduction in 2006 *(due to lower import prices, partly caused by the abolishment of customs for imports through the implementation of the Interim Agreement preceding the full implementation of SAA),* as well as revenues from direct taxes *(which show slower increase)*. Current financial situation of social insurance funds does not allow any further reduction of SSC while it could jeopardize the living standard of pensioners as well as level and quality of health care services. Thus, FBH government needs to look, for eventual further reduction of labour costs and consequently revenues reduction, for alternative revenues sources that could finance the arising gap. Therefore, more detailed analyses with policy options should be precondition for any policy change in area of labour taxation.
2. *Detailed analyses of expected results in light of labour cost reduction on employment levels is needed:* Further, analyses needs to provide expected results in terms of higher employment levels, if FBH government decides on further reduction of income tax and social security contribution rates. Recent policy changes of labour taxation have not showed any expectations in the levels of employment. It was rather politically forced decision. Labour taxation is very sensitive issue of taxation, therefore it is necessary to review current environment e.g. the role of trade unions because the reduction of the tax wedge does not necessarily leads to higher employment levels (but to mere transfers of the effects on net wages without having any effect on employment levels).
3. *Harmonization of PIT rates between entities with considering further introduction of progressivity in income tax:* Personal income tax policies among entities made significant steps in harmonization; however, further efforts should be made toward full harmonization

of PIT at inter-entity levels. It is to note that PIT rates are not high and still competitive in international standards.

4. *Continue with development of labour cost index and labour cost survey by BH statistic institutes in line with Eurostat methodology in future period:* The analyses on tax wedge and labour costs is very simplified in the study due to absence of real labour cost statistics. Any policy proposal should use official statistics comparable to other countries, which currently not available.
5. *Smanjenje stope doprinosa za socijalno osiguranje te ujednačavanje istih između entiteta:* BH is labour intensive economy. Recent policy changes in labour taxation brought lower tax wedge for low income workers. The policy should continue in this direction, with the goal of reaching positive labour market outcomes and employment levels. Social security contributions are high in international standards, but are subject to change if financial implications of such policy are carefully analysed. Thus any policy proposal should aim at least the fiscal neutrality. In some cases, labour tax restructuring (policy of reducing tax burden on low-skilled labour on the cost highly skilled labour can bring have an effect of fiscal netruality (*Arandarenko*) and increase labour market outcomes. However, further increase of tax burden on skilled labour should not be considered since it is already high.
6. *Continue with reforms in area of pension and health insurance but consider the minimum standards set by European Code on Social Security*: Reforms in area of social security should review the obligatory minimum standards set by European Code on Social Security. Harmonization of benefits from social security with minimum standars of EU should be subject of further analyses. According to knowledge, pension system reform has not considered expectations from EU integration processo. Study does not provide any detailes on approximation of BH social security system to those in EU, but it is surely the gap that needs to be examined, especially if ratification of European Social Charter by BH, thus it will have to in the future period incorporate the minimum standards into BH system of social security. Thus carefula examination of standards and benefits is an imperativ that needs to be taken into account in analyses of potential labour cost reduction.

Table 1: Calculation of total labour costs and tax wedge in FBH (*OECD standard methodology for single individual with single tax* deduction),

2008, **(in KM)**		**MW**	**AW**	**2AW**	**4AW**	**6AW**
Gross wage (1)	**1**	**531**	**1162**	**2321**	**4644**	**6965**
Contributions - paid by employee , share of gross wage (2)	2					
Pension and disability insurance 17%		90.3	197.5	394.6	789.5	1184.1
Basic health insurance 13%		69.0	151.1	301.7	603.7	905.5
Unemployment insurance 2%		10.6	23,2	46.4	92.9	139.3
Total (32%)		169.9	371.3	742.7	1486.1	2228.8
Contributions -paid by employer, share of gross wage (3)	3					
Pension and disability insurance 7%		37,2	81,3	162,5	325,1	487,6
Basic health insurance 4%		21,2	46,5	92,8	185,8	278.6
Unemployment insurance 0.5%		2.7	5.8	11.6	23.2	34.8
Total (11,5%)		61.1	133.6	266.9	534.1	800.9
Total contributions (43,5%)	4=3+2	230,9	505,5	1009,6	2020,1	3029,8
Basis for income tax (PIT)	5=1-2	361.1	790.2	1578.3	3157.9	4736.2
Personal income tax 5%	6	18.1	39.5	78.9	157.9	236.8
Net wage	**7**	**343.0**	**751.0**	**1500.0**	**3000.0**	**4500.0**
Fringe benefits (non contributory benefits, hotmeal)	8	300	300	300	300	300
Employee's take-home wage	9=7+8	643	1051	1800	3300	4800
Labour costs excluding fringe benefits (transport costs 53 KM, hot meal allowance 2% of last published AW in FBH with ceiling for hot meal allowance of 16 KM per day	10=1+3	**577.9**	**1266.3**	**2529.3**	**5057.6**	**7585.8**
Labour costs, including fringe benefits	11=1+3+8	877.9	1566.3	2829.3	5357.6	7885.8
Tax wedge excluding fringe benefits	12=15/10	42,1%	42,1%	42,1%	42,1%	42,1%
Tax wedge including fringe benefits	13=15/11	28.5	34.8	38.45	40.7	41.4
Total tax burden on net wage	14=(11-7)/7	72,6%	72,6%	72,6%	72,6%	72,6%
PIT+total SSC (total tax)	16=6+4	250	545	1088	2178	3266
Total tax burden on gross wage	17=16/1	46.9	46.9	46.9	46.9	46.9

Table 2: Calculation of total labour costs and tax wedge in FBH (*OECD standard methodology for single individual with single tax deduction*), (taken recent changes in legislation enacted 1.1.2009)

Federation BH		**MW**	**AW**	**2AW**	**4AW**	**6AW**
Gross wage	1	504	1161	2367	4783	7198
Contributions - paid by employee , share of gross wage						
Pension and disability insurance 17%		85.68	197.4	402.4	813.1	1223.8
Basic health insurance 12.5%		63.0	145.1	295.9	597.9	899.9
Unemployment insurance 1.5%		7.56	17.4	35.5	71.7	107.9
Total (31%)	2	156.2	359.9	733.8	1482.7	2231.4
Taxable wage	3=1-2	347.8	801.1	1633.2	3300.3	4966.6
Basic deduction	4	300	300	300	300	300
Taxable basis	5=3-4	47.8	501.1	1333.3	3000	4667.3
Personal income tax (PIT), 10% over 300 KM monthly	6	4.8	50.1	133.3	300.0	466.7
Net wage (7=3-6)	**7=3-6**	**343**	**751**	**1500**	**3000**	**4500**
Fringe benefits	8	300	300	300	300	300
Take home wage (net wage including fringe benefits)	9=7+8	643	1051	1800	3300	4800
Contributions -paid by employer, share of gross wage						
Pension and disability insurance 6%		30.2	69.7	142.0	286.9	431.9
Basic health insurance 4%		20.2	46.4	94.7	191.3	287.9
Unemployment insurance 0.5%		2.52	5.8	11.8	23.9	35.9
Total 10.5%	9	52.9	121.9	248.5	502.2	755.9
Total contributions	**10**	**209.2**	**481.8**	**982.3**	**1984.9**	**2987.6**
Labour costs excluding fringe benefits (transportation costs 53 KM, hot meal allowance 2% of last published average wage in FBH	11=1+9	**556.9**	**1282.9**	**2615.5**	**5285.0**	**7953.8**
Labour costs, including fringe benefits	12=1+9+8	856.9	1582.9	2915.5	5585.0	8253.8
Tax wedge, excluding fringe benefits (%)	13=14/(1+9)	38.4	41.5	42.7	43.2	43.4
Tax wedge, including fringe benefits (%)	14=16/12	24.9	33.6	38.3	40.9	41.9
Total tax burden on net wage	15=(11-7)/7	62.4	70.8	74.4	76.2	76.8
PIT+total SSC (total tax)	16=(6+2+9)	213.9	531.9	1115.6	2284.9	3454.3
Total tax burden on gross wage	17=16/1	42.4	45.8	47.1	47.8	47.9

Table 3: Calculation of total labour costs in 2009 in RS (taken recent changes in legislation enacted 1.1.2009 and for comparison reasons average wage in FBH has been used)

Republic of Srpska		**MW**	**AW**	**2AW**	**4AW**	**6AW**
Gross wage (1)	1	500	1161	2312	4661	7011
Contributions - paid by employee , share of gross wage (2)	2					
Pension and disability insurance 17%		85.0	197.4	393.0	792.4	1191.9
Basic health insurance 11.5%		57.5	133.5	265.9	536.0	806.3
Unemployment insurance 0.7%		3.5	8.1	16.2	32.6	49.1
Child protection 1.4%		7.0	16.3	32.4	65.3	98.2
Total (30.6%)		153.0	355.3	707.5	1426.3	2145.4
Taxable wage	3=1-2	347.0	805.7	1604.5	3234.7	4865.6
Basic deduction	4	300.0	300.0	300.0	300.0	300.0
Taxable basis	5=3-4	47.0	505.7	1304.5	2934.7	4565.6
Personal income tax (PIT), 8% over 300 KM monthly	6	3.8	40.5	104.4	234.8	365.3
Net wage	7=3-6	**343.0**	**751.0**	**1500.0**	**3000.0**	**4500.0**
Fringe benefits (taxable with basic salary)		-	-	-	-	-
Labour costs	8=1	500.0	1.161	2.312	4.661	7.011
Tax wedge (%)	9=(2+6)/8	31.4	34.1	35.1	35.6	35.8
Share of total tax in net wage	10=(2+6)/7	45.7	51.7	54.1	55.4	55.8
PIT + total SSC	11=6+2	156.8	395.8	811.9	1664.1	2510.7
Total tax burden on gross wage	12=11/1	31.3	34.1	35.1	35.7	35.8

Table 4:
Revenues from social security contributions as % GDP and % in total tax, 2006 OECD

EU15	in GDP (%)	in total tax (%)	NMS	in GDP (%)	in total tax (%)
BE	13.6%	30.4%	BG	8.8%	25.5%
DK	1.0%	2.1%	CZ	16.2%	44.7%
DE	15.9%	40.6%	LV	8.7%	28.8%
EL	11.1%	35.3%	LT	8.5%	28.6%
IE	4.9%	14.9%	HU	12.5%	33.6%
FR	16.5%	37.2%	MT	6.2%	18.5%
IT	12.7%	30.1%	RO	9.8%	34.2%
UK	6.8%	18.1%	SI	14.3%	36.6%
LU	9.9%	27.9%	SK	11.7%	40.0%
NL	14.2%	36.0%	PL	12.2%	36.1%
AT	14.4%	34.4%	CY	7.8%	21.4%
PT	11.4%	31.7%	EE	10.2%	32.9%
FI	12.1%	27.8%	FBH	14.3	
SE	12.1%	24.8%	RS	10.9	
ES	12.1%	33.3%			

Table 5:
Revenues from income tax as a % GDP and % in total tax for 2006

EU15	In GDP (%)	In total tax (%)	NMS	In GDP (%)	In total tax (%)
BE	12.2%	27.3%	BG	2.7%	7.9%
DK	24.5%	49.9%	CZ	4.2%	11.7%
DE	8.9%	22.7%	LV	6.0%	19.8%
EL	4.6%	14.8%	LT	6.9%	23.1%
IE	7.3%	22.4%	HU	6.7%	18.1%
FR	8.0%	18.0%	MT	6.8%	20.1%
IT	10.8%	25.5%	RO	2.8%	10.0%
UK	10.6%	28.2%	SI	5.9%	15.0%
LU	7.5%	21.1%	SK	2.5%	8.5%
NL	7.0%	17.8%	PL	4.6%	13.6%
AT	9.7%	23.2%	CY	4.6%	12.5%
PT	5.5%	15.2%	EE	5.6%	18.2%
FI	13.2%	30.4%	FBH	1.8	
SE	15.5%	31.6%	RS	1.6	
ES	7.1%	19.4%			

Source: Tax trends in EU (2008)

Table 6:
Dependency ratio (DR), pension and disability insurance (PDI) and total SSC rates in EU countries (2008)

	DR	PDI	SSC total
Austria	53.1	22.8	42.2
Belgium	52.2	16.36	37.84
Cyprus	47.1	12.6 [b]	12.6
Finland	49.9	21.7	26.7
France	53.1	16.55 [a]	42.48
Germany	49.7	19.9	39.42
Greece	48.4	20	33.65
Ireland	46.6	12.5 [b]	12.5
Italy	50.8	32.7	40.86
Luxemburg	48.6	16	28.02
Netherland	48.4	24.65	32.9
Portugal	48.4	34.75 [b]	34.75
Spain	45.3	28.3 [b]	37.33
Sweden	52.9	18.91	30.43
UK	51.7	23.8 [b]	23.8

	DR	PDI	SSC total
Bulgaria	44.9	22	32.9
Czech R.	40.8	28	47.5
Hungary	48.1	33.5 [b]	49
Latvia	44.9	33.09 [b]	33.09
Lithuania	47.3	26.2	34.5
Malta	44.1	20 [b]	20
Poland	42.0	27.52	42.07
Romania	43.9	38.5	53.25
Slovak R.	39.9	18	37.6
Slovenia	42.4	24.35 [b]	38.2
Estonia	46.6	22	35.9
Serbia	49.7	22 [b]	35.8
Albania	53.1	29.7	42.3
Croatia	48.6	20 [b]	37.2
BH-FBH			41.5
BH-RS			

Source: Social security administration (ISSA), Social security programs throughout the world (2008)
Depdendency ratio (DR): share of population 14 year and below plus populationage 65+ dividedby population age 15/64
a. contributions finance old age pension only. Additional contributions are required for survivor and disability benefits
b. Also includes the contribution rates for other programs.

Table 7:
Difference between two policy scenario of labour taxation and the main indicators

	Minimum wage			Average wage (AW)			2AW		
	1	2	%	1	2	%	1	2	%
LC	592	557	-6.67%	1295.6	1283	-0,97%	2587.9	2616	1,08%
TW	42.1%	38.4%	- 3,7 % pts	42.1%	41.5%	-0,6% pts	42.1%	42.7%	0,6% pts
TTB	72.6%	62.4%	- 10,2 % pts	72.6%	70.8%	-1,8% pts	72.6%	74.4%	1,8% pts
GW	531.0	504	-5,34%	1,162.0	1.161	0	2,321.0	2.367	1,9%
	4 AW			6 AW					
	1	2	%	1	2	%			
LC	5178.1	5283	2,02%	7765.9	7954	2,4%			
TW	42.1%	43.2%	1,1% pts	42.1%	43.4%	1,3% pts			
TTB	72.6%	76.2%	3,6% pts	72.6%	76.8%	4,2% pts			
GW	4,644.0	4.781	2,9%	6,965.0	7.198	3,3%			

Table 7 :
Overview of main fiscal measures affecting ITE on labour in EU countries

Country	Measures in domain of taxation	Measures in domain of social contributions
Austria	Reduction in tax credits (general, employees and pensioners tax credit). Reduction in the income and wage tax of low and middle income earners, reduction in the number of tax brackets (2004-2005).	Reduction in employers' contribution rates for health insurance and pay insurance schemes for 'blue collar' workers (2001).
Belgium	Indexing of tax brackets abandoned. Introduction of 'crisis tax' on top of all statutory rates plus 'solidarity levy' on personal income (1997). Reintroduction of automatic indexing of tax brackets (1999). Phasing out of additional 'crisis tax' (1997-2004).	Lowering of employers' contributions, especially in respect of the low-paid. The scope of the reductions in employers' social contributions was expanded to more social security schemes (1997-2001), and was followed by the introduction of the Esta fette plan as well as the possibility for deductions of employers' contributions over the amount due (2005).
	Personal income tax reform of which the main provisions are (a) lowering the tax burden on earned income including the introduction and subsequent increase of refundable employment tax credit aimed at low paid workers (b) a neutral tax treatment of spouses and singles (c) more favorable treatment of dependent children (d) greening of the tax system (2000-2006).	Flat rate reductions in employers' contributions for young workers, low skilled workers and workers aged over 45.
	Introduction and increase of tax rebates for scientific researchers (2003-2007) and shift workers (2004-2007). The tax rebate is granted on the amount of withholding tax that has to be paid by the employer to the tax administration.	Replacement of the refundable employment tax credit by an increased reduction in employee contribution for low paid workers (2005).
Bulgaria	Continuous lowering of the top PIT rate, increase of the non-taxable minimum and flattening of the tax brackets almost annually, most notably since 2002	Lowering of the social security contribution rates by 3 percentage points (2001) and by 6 percentage points (2006).
	Introduction of annual allowances for children.	Introduction of second pillar and transfer of it to a share of social security contributions for people born after 1 January 1960
	Introduction of a 10 % flat PIT rate (2008).	Gradual increase of the share of the contributions paid by the employees and decrease in the one paid by the employers (2000-2006).
Cyprus	Progressive increase of the non-taxable allowance (1995- 2003). Cut in the PIT rates from 20/30/40 % to 20/25/30 % (2003).	No major changes.
Czech Republic	Reduction from 6 to 4 brackets (2000) Revision of several allowances (2001). Introduction of the family splitting for families with children (2005). Cut in two lowest tax rates from 15 % to 12 % and from 20 % to 19 % respectively, broadening of the first tax bracket and replacement of standard tax allowances by tax credits (2006). Introduction of a 15 % flat PIT rate and increase in tax credits (2008).	No major changes.

Denmark	Cut in rate of low tax bracket (1996-1999). Increase in rate of additional medium tax bracket (1997). Cuts in personal income tax, especially at the bottom to the middle end (1999-2002).	Increase in employees' social contribution rate (1997).
	Increase in threshold of medium tax bracket and introduction of an earned income tax credit or employment allowance (2004).	Introduction of employees' contributions for special pension savings scheme (1999).
	Abolition of county taxes along with an offsetting increase in municipal taxes and introduction of 8 percent healthcare state tax (2007).	Temporary suspension of obligatory contributions to the special pension scheme (2004-2008).
	Increase in personal allowance and earned income tax credit (2008).	
Estonia	Gradual cut in flat income tax rate from 26 % (since 1994) to 18 % (2005 to 2011).	Introduction of the unemployment insurance premium (2002).
	Gradual increase of basic allowance in nominal terms by 100 % (2003 to 2006) and further increase by 50 % (2011).	Reduction in the unemployment insurance rates (2006): for employees 0.6 % (formerly 1.0 %) of gross wage and for employers 0.3 % (formerly 0.5 %) of employee's gross wage.
	Decrease of the maximum amount for the deductions from 100 000 EEK to 50 000 EEK (2005).	Increase in the minimum rate for the social tax in case of self-employed persons from 2000 EEK a month in 2007 to the previous year's minimum wage from 2009.
	Additional basic allowance for the first child (2008).	
Finland	Reductions in local income tax especially at the bottom to the middle end by means of earned income tax allowance (1995-2005)	Reductions in employees' and employers' contribution rates (1997-2002).
	Abolition of the lowest state income tax bracket (increase in the tax exemption) (2001), subsequent annual increase in the lowest amount of income subject to state taxation.	
	Introduction of earned income tax credit in state income taxation (2006) and subsequent increase (2007).	Increase in employers' and employees' contribution rates (2004 and 2005).
	Cut of marginal tax rates in state income taxation for all tax brackets (2003-2008) and reduction in the number of tax brackets from five to four (2007).	
France	Introduction of contribution for refunding of debt of social security institutions (CRDS) with a broader base than the generalised social contribution (CSG) (1996).	Reduction in employers' contributions for low-paid workers (1997-2001).
	Introduction of the Prime pour l'Emploi targeted especially to low-income earners (2001).	Reduction in employees' sickness contributions (1998).
	Introduction of a tax shield limiting direct taxes to maximum 60 % of income (2006).	Reduction in employees' and employers' unemployment contributions (2000-2001).
	Remodelling of income tax through a reduction in the number of income tax brackets from six to four and by lowering the rates (2006).	Enterprises of less than 20 employees benefit from a total exemption from employer's social security contributions for employees receiving the minimum statutory salary (2007).
	Reinforcement of tax shield to 50 % of income (2008).	
Germany	Across-the-board cuts in personal income tax bringing the highest marginal rate down from 53 % to 42 % and the lowest rate from 25.9 % to 15 % (1999-2005).	Increase in social contribution rates (1997).

	Gradual increase of basic tax-free allowance by nearly a quarter (1998-2005).	Reduction in social contributions to the pension system funded by ecological tax reform (1999-2002).
	Introduction of a new top marginal tax rate of 45 % (2007).	Slight increases in contribution rate to the old-age insurance (2003, 2007).
		Reduction in the contribution rate to the unemployment insurance in two steps from 6.5 % to 3.3 % (2007, 2008).
Greece	Cut in highest statutory personal income tax rate, indexing of tax brackets plus increase in the level of tax-exempt income (2000-2002).	Reductions in employers' and employees' pension contributions in respect of new staff and at the low end of the wage scale (2001-2002).
	Conversion of tax deductions into tax credits (2003).	
	Increase of the non-taxable income and expansion of the central tax scales. Abolition of PIT rate of 15 %. Gradual reduction of PIT rates for the taxable income of € 12 000 up to the level of € 75 000, for income earned in the 2007-2009 period. PIT rate remains 40 % for income higher than € 75 000 (see country chapter for details).	
Hungary	Income tax brackets reduced from six to three. Decrease in employees' tax credit (1999).	Employers' total payroll costs generally reduced to 37.5 % (1999).
	Changes in tax brackets (2001 and 2003).	Employers' social contributions reduced (2001).
	Increase in employees' tax credit (2002)	Increase in employees' mandatory pension contributions (2003).
	Reduction in the number of tax brackets to two through abolition of the middle bracket (2005).	Decrease in lump-sum health contribution (2005)
	Cut in highest rate from 38 % to 36 %, introduction of a 4 % solidarity tax on high salaries (2006).	Increase in employee's individual healthcare contribution from 4 % to 6 % (September 2006) and to 7 % (2007).
	Change in tax brackets (2007).	
Ireland	PIT rates cuts: of the lower band from 27 % to 20 % (1997-2001) and the higher band from 48 % to 42 % (1998-2001) and 41 % (2007).	Reduction in employers' 'PRSI' contributions (1997-2002).
	Revenue-neutral move from a system of tax allowances to a system of tax credits (completed in 2001).	
	Increases in basic tax allowances/credits (1997-2008).	Reductions in employees' 'PRSI' contributions (1997-2008
	Widening and individualisation of the tax bands (1997-2008).	
Italy	Cut in the second bracket of the income tax (2000).	Reduction in employers' health care contribution rate.
	Further general cuts in rates, in particular on the middle brackets (2001-2002).	Introduction of new regional tax ('IRAP') based on the value of production net of depreciations (1998).
	Family allowance supplemented by an additional tax credit depending on the number of dependent children (2002).	Reductions in employers' social contributions in respect of new jobs and at the low end of the pay scale (1997-2000).
	Introduction of a 'no tax area' for low level of income (2003).	
	Revision of PIT tax rates (2003 and 2005).	Reduction in IRAP from 4.25 % to 3.9 % (2008).

	2007 finance bill introduced several changes mainly in the direction of increasing the equity of the tax system, raise in tax-exempt basic allowances; introduction of cuts to second and third bracket (from 33 % to 27 % and from 39 % to 38 %) for different levels of income; introduction of new fourth 41 % rate bracket; fifth 43 % bracket now applies to incomes from € 75 001 instead of € 100 000.	
Latvia	Gradual increase of non-taxable minimum and relief for dependants (2005-2008).	Gradual reduction in the rate of social insurance contributions from 38 % to 33.09 %, (1997, 2000, 2001 and 2003). Increase in income ceiling up to which social security contributions are due by around on quarter (2008).
Lithuania	Gradual increase of basic tax-exempt allowance from 142 LTL to 320 LTL and corresponding increase of individual allowances for disabled and single parents (1996 to 2008). Introduction of additional tax-exempt allowance for the first and second child (0.1 of basic tax-exempt allowance, 2003) Gradual reduction in the income tax rate from 33 % to 24 % (2006-2008).	Mandatory social contributions increased by 1 % (to 31 %) of gross wages for employers and by 2 % (to 3 %) for employees (2000).
Luxemburg	Across-the-board cut in personal income tax rates (1998)	Increase in contribution for sickness insurance (2000).
	Increase in the minimum level of taxable income (2001	Reform of public insurance for medical care and increase in employees' contribution rate to long-term care scheme from 1 % to 1.7 % (2007).
Malta	Reduction in the number of tax brackets and change in range of rates (2000) Increase in tax thresholds (2002). Increase in the number of tax brackets and change in the tax thresholds (2003) Reduction in the number of tax brackets and change in Increase in tax thresholds (2008).	No major changes
The Netherland	Across-the-board cut in personal income tax (2001).	Contribution for disability insurance scheme shifted from the employee to the employer (1998). Increases in employees' contribution rate for state pensions
	Introduction of a tax credit for all employees and selfemployed	Reductions in wage tax and employers' social contributions Reductions in employees' contribution rate for unemployment insurance (2001).
Poland	Cut in tax rates and limitation of tax deductions (up to rise of thresholds for the taxable income (2007)	Introduction of new health care insurance system (2006)
	General cut in PIT rates (2001).	Global reform of the social security system (1999).
	General cut in PIT rates (2005). Introduction of a new top tax bracket, changes in tax credits (2006).	Targeted reductions in employers' social contributions (2001).
Romania	Introduction of a flat rate tax system with a tax rate of 16 %, replacing the	Reductions in employees' and employers' contribution rates (2006-2008)

	previous four bracket system with tax rates ranging from 18 to 40 % (2005).	Global reform of the social security system: broadening of the tax base by the inclusion of bonuses; removal of the ceiling of five average gross wages on the payment of SSC etc. (2008)
		Reform of pension system - introduction of a compulsory second pillar (starting with 2008).
Slovenia	Reduction in the number of tax brackets from six to five	Decrease of social contributions and introduction of phasing out of payroll tax by 1 January 2009 (2005-2009). Rates are 0 %, 2.3 %, 4.7 % and 8.9 % in 2007 and 0 %, 1.1 %, 2.3 % and 4.4 % in 2008.
	Reduction in the number of tax brackets from five to three; increase in general allowance for all taxpayers (from € 2,522 to € 2,800), increase in tax allowances for taxpayers with three or more children (2007).	
	Introduction of a dual income tax system (dividends, interest and capital gains are taxed separately by proportional rates, 2006).	
Slovakia	Increase in tax allowances, reduction in the number of tax brackets from 7 to 5 (1995-2002)	Reduction in employers' social contributions by 2.8 % (1995-2006).
	Reduction in the top and in the bottom rates (2003)	Increase in employees' social contributions by 1.4 % (1995-2006).
	General tax reform, shift of the tax burden from direct toward indirect taxes, elimination of exemptions and special regimes and introduction of flat tax rate of 19 % in PIT (2004).	Linkage of the contributions ceiling (payroll tax cap) to the average wage (3 or 1.5 x average wage).
	Reduction in the non-taxable personal allowance (2007)	Introduction of healthcare contribution annual clearing (in 2006 for health contributions paid in 2005).
		Introduction of mandatory privately managed fully funded pillar at 9 % of gross earnings (2005).
		Increase in contributions ceiling (payroll tax cap) from 3 to 4 times the average wage (2008).
Spain	Across the board cut in PIT rates, increase in basic personal allowances and increase in work income allowance for low wages (1999).	Targeted reductions in social contributions (1997-2000).
	Cut in personal income taxes and introduction of a non wastable annual tax credit of € 1000 for working females with children under 3 years of age (2003).	Reduction in unemployment contributions for employers and employees (2001).
	Reduction in the tax scale applicable to the general component of taxable income from five brackets (15 % to 45 %) to four (24 % to 43 %, 2007).	Introduction of various abatements and reductions in social contributions for hiring of disadvantaged workers (2006).
	Increase in personal and family allowances, which are now included in the first income bracket taxed at a zero rate (2007).	
	Steady increase in the general tax allowance for employment based on a non-linear formula (2007, 2008).	
	Introduction of general tax deductions (for women giving birth to children and for renting of own occupied housing, 2007).	Reduction of SSC of up to 40 % for research workers (2007).
	Introduction of a € 400 general tax rebate for all income earners (2008).	

Sweden	Reductions in central- and local income tax, especially at the bottom to the middle end (1999-2001).	Increases in employees' contribution rates (1995-1998).
	Increase in threshold for State income tax (2000-2002) and increase in basic allowance (2001-2002).	Reductions in employers' contribution rates (2000-2001).
	Increase in the tax reduction linked to pension contributions, higher basic tax allowance for low and middle income earners (2006). Introduction of an earned income tax credit in two steps (2007, 2008)	Reduction in employers' social contributions (2004, 2006 and 2007).
UK	Personal income tax reductions, especially at the bottom to the middle end (1999-2000).	Increase in starting point for paying national insurance contributions (NIC) for employers and employees.
		Reduction in employers' contribution rates to compensate for introduction of climate levy (1999-2001)
		Increase of the NIC by 1 % for both employers andemployees (2002)
Norway	Reduction of surtax (1999, 2002-2006).	Phasing-out of regionally differentiated employers' SSC(2004-2006).
	Increase of minimum allowance (1999-2002, 2006).	
	Taxation of rehabilitation benefits as wage (2002).	
	Increase of surtax (2000).	

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