

Report No. 32650-BA

# Bosnia and Herzegovina Labor Market Update The Role of Industrial Relations

December 2005

Human Development Sector Unit  
Europe and Central Asia Region



Document of the World Bank

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**BOSNIA AND HERZEGOVINA**  
**LABOR MARKET UPDATE: THE ROLE OF INDUSTRIAL RELATIONS**

**ACRONYMS AND ABBREVIATIONS**

BCA	Branch Collective Agreement
BH	Bosnia and Herzegovina
DFID	United Kingdom Department for International Development
ECA	Europe and Central Asia
ESC	Economic and Social Council
ECRS	Employers Confederation of the Republika Srpska
EU	European Union
FBH	Federation of Bosnia and Herzegovina
GCA	General Collective Agreement
GDP	Gross Domestic Produce
ILO	International Labor Organization
IMF	International Monetary Board
LFPR	Labor Force Participation Rate
LSMS	Living Standards Measurement Survey
MTDS	Medium Term Development Strategy
MVP	Mass or Voucher-Privatized Company
OECD	Organization for Economic Cooperation and Development
PRSP	Poverty Reduction Strategy Paper
RS	Republika Srpska
RSCC	Republika Srpska Chamber of Commerce
SEE	South East Europe
SFRY	Socialist Federal Republic of Yugoslavia
SME	Small and Medium Enterprise
SOE	State-Owned Enterprises
SSRS	Confederation of Trade Unions of Republika Srpska
SSSBH	Confederation of Independent Trade Unions of Bosnia and Herzegovina
UEFBH	Union of Employers of the Federation of Bosnia and Herzegovina
USAID	United States Agency for International Development
VAT	Value Added Tax

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## ACKNOWLEDGMENTS

This report was prepared by a World Bank team led by Zafiris Tzannatos (task manager and principal author, WBIHD) and Christian Bodewig (co-author, ECSHD). Maria Laura Sanchez Puerta (ECSHD) provided extensive analysis of the survey data and contributed to the chapter on earnings, which also presents comparative wage data originally compiled by Lazar Šestović (ECSPE). The report was prepared under the overall supervision of Arup Banerji, Sector Manager, Human Development Economics (ECSHD), and Hermann von Gersdoff, Sector Manager, Social Protection (ECSHD), and was sponsored by Orsalia Kalantzopoulos (Country Director, ECCU4). Augustina Nikolova processed the document at various stages of production, while Imelda Mueller edited the entire report and prepared it for printing.

The team is indebted to Government officials, employers and trade unions representatives in Bosnia and Herzegovina for their support, policy guidance and provision of statistical information. In particular the team would like to thank H.E. Radovan Vignjević, FBH Minister of Labor and Social Policy, and H.E. Miodrag Deretić, RS Minister of Labor and Veterans-Invalid Protection, as well as key officials, especially Assistant Ministers Mr. Muhibija Delić, Ms. Džana Kadribegović, Mr. Rajko Kličković, Mr. Izet Mehinagić and Ms Mira Straživuk; the officials at the Departments of Statistics Mr. Enes Hadžiefendić, Ms Jelena Đokić and Ms Rada Galić; representatives of employers organizations Messrs. Tomislav Grizelj, Esad Ibišević, Damir Miljević, Borko Đurić and Mr. Miso Krunić; trade union officials Messrs. Edhem Biber, Munir Spahić, Hamdo Melez, Sulejman Hrle, Mehmed Avdagić, Čedo Volaš, Danko Ružičić, Ms. Veljka Odžaković, Ms. Ranka Misić, Ms. Fatima Fazlić, Ms. Zorica Kazić and Ms. Amila Borovina; and colleagues from international organizations including Ms. Lejla Tanovic (ILO), Ms. Caroline Brearley and Mr. Almir Jazvin (USAID), and Mr. Andrew Lovegrove (DFID consultant). The team is grateful for valuable comments from Mr. Graham Slack (IMF). Particular thanks are due to the members of the Economic and Social Councils as well as the participants of a workshop on unions and collective bargaining held at the University of Sarajevo in March 2005.

The team benefited greatly from support and guidance from Andrew Dabalen, Willem van Eeghen, Csaba Feher, Monika Huppi, Ivailo Izvorski, Vladimir Kreačić, Arvo Kuddo, Toby Linden, Maniza Naqvi, Philip O'Keefe, Dirk Reinermann, Tarik Šahović, Goran Tinjić, Erwin Tionson, Milan Vodopivec and Ruslan Yemtsov.

The peer reviewers were Ardo Hansson, Lead Economist (ECSPE), and Jan Rutkowski, Lead Economist (ECSHD), and their comments, along with those received by numerous colleagues on the concept paper and earlier versions of this work, greatly benefited the final report.





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# BOSNIA AND HERZEGOVINA LABOR MARKET UPDATE

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## OVERVIEW

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*High wages compared to productivity in the formal sector, the large and growing share of workers in the informal sector who are not covered by social insurance, and persistent unemployment are the three key labor market challenges facing Bosnia and Herzegovina (BH) today.* These are the main findings of this report, laying the analytical underpinnings for a medium-term labor reform agenda in BH. This overview presents a summary of the findings and recommendations of the report, while an assessment of the structure of and trends in the labor market is included in Chapter 1. Chapter 2 examines the effects of the different wage determination processes in the two Entities on earnings, and Chapter 3 reviews the regulatory and industrial relations framework. A review of the international experience with collective bargaining is included in Annex V of this report and can serve as the basis for future discussions among local stakeholders about reform directions for collective bargaining in BH.

*While its findings are broadly consistent with previous analyses and recommendations, this report identifies recent developments in the labor market and, by focusing on industrial relations, provides new policy insights<sup>1</sup>.* The need in BH is still for policies at the macroeconomic and sectoral levels that would enhance the prospects for growth of the BH economy. Although there are some signs of improvement (for example, in terms of inflation control), they are too fragile and not sustainable unless systemic reforms are introduced and effectively implemented. The report shows that there have also been some improvements in labor market outcomes over the last few years. Nonetheless, there is no reason for complacency as more could be achieved. In particular, *changes in the legal and regulatory framework could contribute further to the performance of the labor market.*

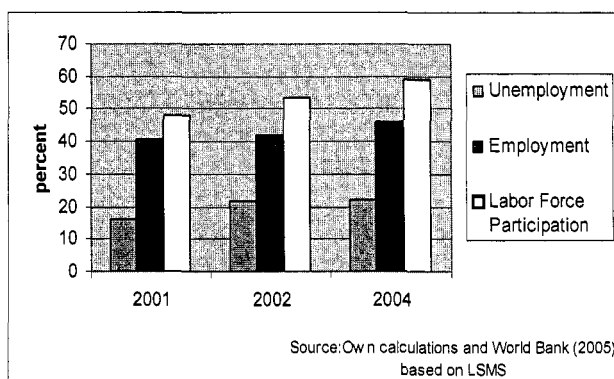
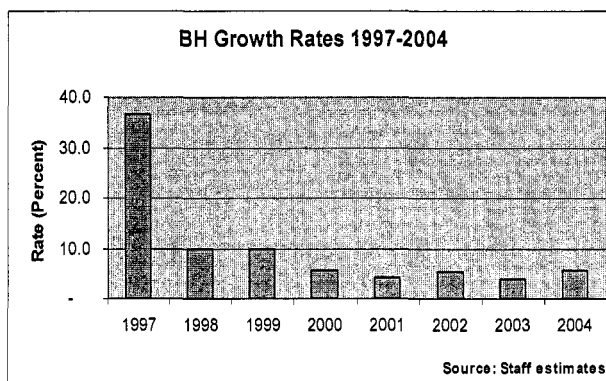
*Labor market analysis in Bosnia and Herzegovina remains constrained by severe data limitations* and needs a strong cautionary note with respect to the quality of available data. The analysis in this report relies on both survey (Living Standard Measurement Survey) and administrative data of doubtful representativeness. The authorities plan to field an annual Labor Force Survey from 2006 which will allow testing the conclusions drawn in this report. However, policymakers would also benefit from surveys of vacancies and job creation to improve the understanding of labor demand.

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<sup>1</sup> World Bank (2002), "Labor Market in Postwar BH - How to Encourage Businesses to Create Jobs and Increase Worker Mobility"; World Bank (2005), "Bosnia and Herzegovina Country Economic Memorandum"; World Bank (2005), "Poverty and the Labor Market in Bosnia and Herzegovina: 2001 to 2004".

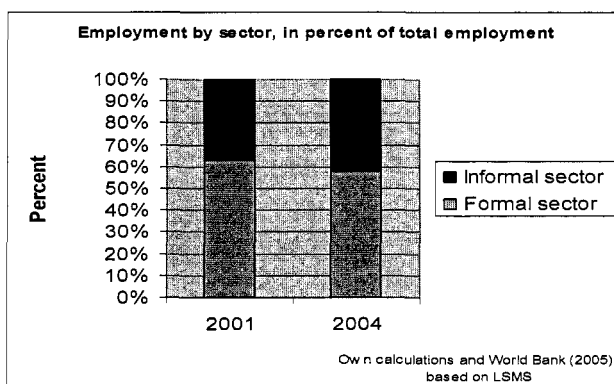
## Recent developments in the labor market

*BH is experiencing continuous GDP growth which has led to employment creation, although not sufficient to make a dent into persistently high unemployment.* Although not as high as in the immediate post-conflict years, annual output growth has averaged around 4-5 percent since 2000, with similar increases in employment (around 4 percent). However, this high employment growth has not been sufficient to reduce unemployment which appears to have stabilized at high rates (at more than 20 percent of the labor force in both Entities). Most net employment creation, around 8 percent annually in the Federation of Bosnia and Herzegovina (FBH) and 1 percent in the Republika Srpska (RS), has been driven by the employment of workers not covered by social insurance and who are classified in this report as informal sector workers.



*While unemployment remains high and some groups (for example, younger workers and the unskilled) are affected more than others, BH has experienced a fast increase in the labor force participation rate and significant gains in employment and hours of work.* The traditionally low labor force participation rate in BH stood at 59 percent in 2004, a significant increase from 48 percent in 2001. Hours worked have also increased, with 92 percent of workers working more 40 hours in 2004 (compared to 88 percent in 2001). In the same period 136,000 additional jobs were created, corresponding to an increase in the employment rate from 40 to 46 percent between 2001 and 2004.

*Much of the net employment generation is driven by a growing informal sector.* The share of the informal sector in total BH employment increased from 37 to 42 percent between 2001 and 2004, jumping from 41 to 49 percent in the RS and from 33 to 36 percent in the FBH. In terms of numbers, net employment in the informal sector increased by about 111,000 overall – with about 70,000 new jobs in the informal sector in the FBH and nearly 40,000 in the RS.



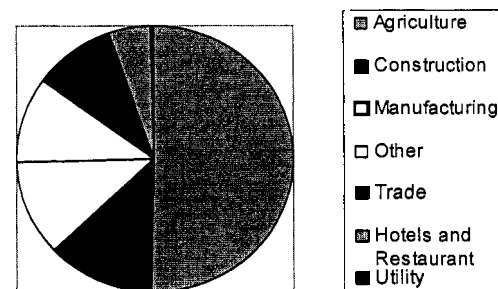
Informal employment in Bosnia and Herzegovina is heavily concentrated in the agricultural sector, with many workers being self-employed and contributing family members.

*There has been heavy hemorrhage of employment in the state-owned enterprises (SOEs) and the privatization and restructuring process of large SOEs per se has been slow.* The share of workers in SOEs in total employment fell from 37 to 20 percent between 2001 and 2004<sup>2</sup>. Today about 220,000 workers remain employed in

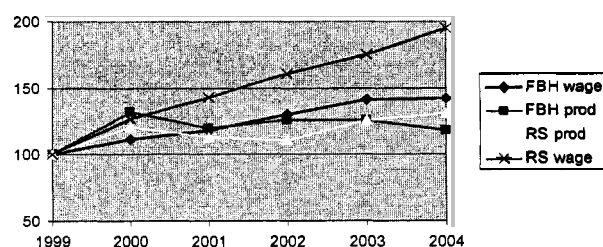
SOEs in both Entities, compared to more than 350,000 three years ago. However, there is evidence from enterprise surveys presented in this report that SOEs continue to suffer from substantial overstaffing. On the other hand, despite the substantial loss of 120,000 SOE workers, total formal sector employment increased from 635,000 to 675,000 (Table 1) or by about 150,000 jobs (nearly 50 percent) in the non-SOEs sector between 2001 and 2004. The source of this substantial job creation in the formal sector is not well understood, supporting the hypothesis that there may be few effective barriers to employment creation at the current level of economic growth. Still, it is reasonable to assume that more could have been achieved had the labor market been seamless (i.e., between the two Entities, or between the public and private sectors) and without some issues in the labor regulatory framework (see below).

*There are significant differences in labor market outcomes between the two Entities: generally, the labor market performance of the RS trails that of the FBH on some key indicators.* While analysis of productivity developments is constrained by doubts about employment data quality, it appears that, across the economy as a whole, wage growth in RS has outstripped productivity growth over the past years, while in FBH this discrepancy is less pronounced. However, this Entity-wide picture conceals diverging patterns across industries and may be prone to measurement errors. Therefore, it is useful to look at individual industries. For example, productivity in the RS manufacturing sector appears to have grown strongly in recent years and in line with wages, while in FBH it has declined. Although labor force participation and the employment rates remain higher in RS, there has been an equalizing trend between the Entities recently. Between

Distribution of Informal Sector Employment 2004

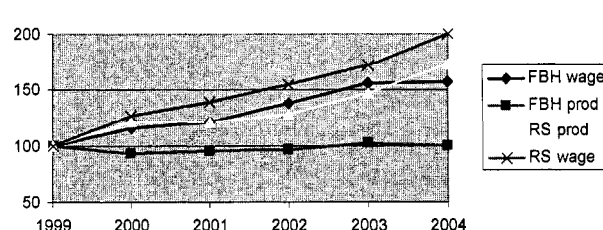


Wage and Productivity Growth, 1999=100



Source: Staff estimates based on Statistical Institute paid employment data

Wages and Productivity, Manufacturing, 1999=100



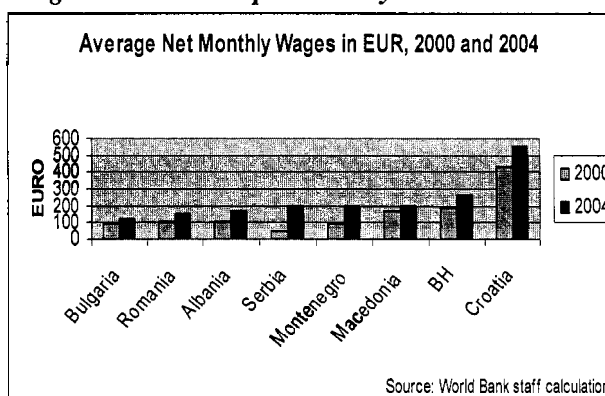
Source: Staff estimates based on Statistical Institute paid employment data

<sup>2</sup> For a detailed analysis based on LSMS data of the structure and evolution of SOE employment, see World Bank (2005)

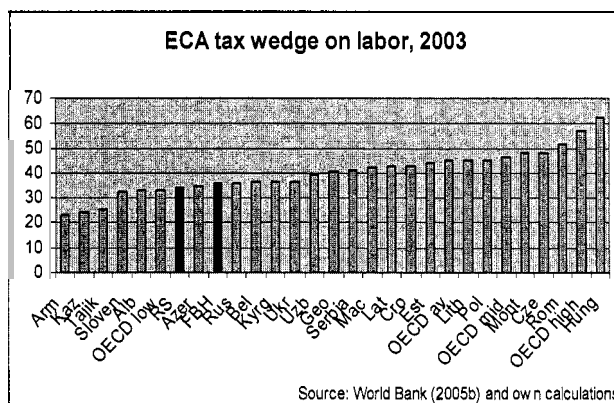
2001 and 2004, the labor force participation rate in the RS increased by only four percent annually, compared to 10 percent in the FBH. The employment rate in the RS increased by only one percent annually, compared to eight percent in the FBH, with a resulting net employment increase of only 9,000 (compared to 140,000 in the FBH). The share of the formal sector is much lower in the RS (51 percent of total employment) than in the FBH (64 percent), and has also declined faster - by 5 percent annually compared to only 2 percent in the FBH. Unemployment in the RS increased by 60 percent (from 15 to 24 percent) compared to 23 percent in the FBH (from 17 to 21 percent). Wages are 20 percent lower in the RS than in the FBH, but have been increasing 4-5 percentage points faster per annum than in the FBH. The Entities also retain different systems of minimum wage determination, rates of payroll contributions and social insurance provisions. Most importantly, non-wage allowances are included in the base for social insurance contributions in the RS but not in the FBH.

***Overall, formal sector aggregate wages relative to productivity in Bosnia and Herzegovina remain high in a regional context.***

BH's net wages have been high compared to its neighbors in Southeast Europe (SEE), second only to Croatia, and this picture has remained unchanged between 2000 and 2004. Comparative wage levels in the EU accession candidates Bulgaria and Romania are substantially lower than in BH. Although real wage increases in BH have not been the highest in the region, they appear to be increasing at a constant rate over time, and



***costs that are driven by high levels of net wages.*** Although the report does not attempt to assess the correct rate of contributions for social insurance purposes (in terms of costs to the employers and levels of protection afforded to the workers), it notes that the rates and, more generally, the social insurance systems are not harmonized between the Entities. This can affect investment decisions between the two Entities and create a duality between the two labor markets. Unlike in the RS and international practices, social insurance contribution rates in the FBH are levied on a narrow base which excludes non-wage allowances from the calculations.





This implies the need for flexibility elsewhere and in particular in the labor market. Moreover, employment growth requires wage restraint, evident in wage increases not exceeding productivity increases.

*Overall, the BH labor market should be able to create more formal sector jobs if it addresses deficiencies outside the labor market, arising from poor investment climate and delayed restructuring and privatization.* At the same time, there are issues within the labor market that create a duality between the two Entities, and between the formal/public and informal employment. These are the subject of this report.

<b>Table 1</b>			
<b>BH Selected Labor Market and Economic Indicators, 2001-04</b>			
	<b>FBH</b>	<b>RS</b>	<b>BH</b>
<b>Employment (,000)</b>			
2001	551	448	1000
-- formal	370	265	635
2004	692	457	1149
-- formal	441	234	675
Increase in Employment	140	9	149
-- formal	71	-31	40
-- informal	70	39	109
<b>Unemployment (,000)</b>			
2001	112	81	190
2004	182	143	324
Increase	69	62	134
<b>Unemployment Rate (%)</b>			
2001	17	15	16
2004	21	24	22
<b>Annual percentage changes in ... (2001-2004)</b>			
Nominal wages	6	10	n.a.
Inflation	1	1	n.a.
Labor Force Participation Rate	10	4	7
Employment rate	8	1	4
Share of formal sector in employment	-2	-5	-3
GDP growth	n.a.	n.a.	5

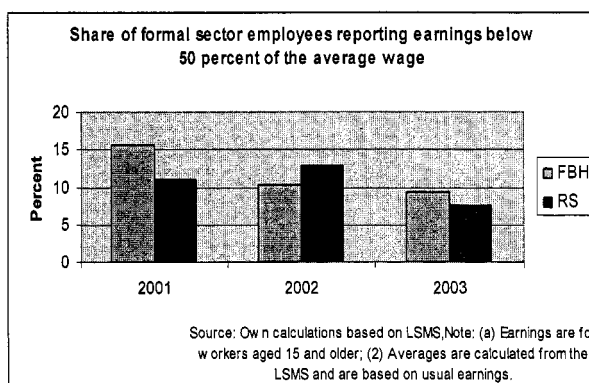
Note: Figures subject to rounding errors. Source: Own calculations based on LSMS 2001 and 2004

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## The impact of labor regulations on labor market outcomes

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*Although substantial aspects of labor regulations are rigid on paper, particularly in the collective agreements, they do not appear to have the expected negative effect on the labor market at large.* Nominal wages have been growing faster in the RS than in the FBH, although the FBH minimum wage indexation mechanism would have predicted faster wage growth in the former. In addition, the minimum wage in the FBH, currently at 55 percent of the average wage, does not appear to be fully binding: while about 20 percent of the formal sector employees in the FBH report earnings less than the minimum wage, only a little less than 10 percent are paid less than half the average wage – almost the same share as in the RS, where the minimum wage is set at a non-binding low level. Finally, after controlling for other characteristics, length of employment service (tenure) does not appear to have a statistical impact on wages, although collective agreements specify mechanical increments for seniority. Similarly, the impact of education on wages is found to be far below the (also mechanical) education-related increments prescribed in collective agreements (see Box A).



*However, while some or many of their provisions may be evaded selectively or by the labor market at large, collective agreements can still have a substantial negative effect in select industries and sectors.* Collective agreements are clearly enforced in some public sector enterprises, and rigid regulations may be also responsible for the increase in the size of the informal sector. But not all collective agreement provisions are observed, and not in all parts of the labor market: although it is generally understood that all employers are bound by the general collective agreements, systematic enforcement of branch collective agreements outside the broadly defined public sector has been limited. Many *de novo* private sector companies in the formal sector comply with only parts of general collective agreements, if at all. Likewise, many State-owned and privatized companies, while formally covered by such agreements, avoid or evade some of their provisions due to financial constraints. For example, the heating allowance in the RS, although included in collective agreements, no longer appears to be paid by most enterprises.

*At the same time, there are obstacles to smooth labor adjustment driven by gaps in legislation and inadequate practices.* The labor legislation in BH has no provisions for layoffs that can help companies respond, at least temporarily, to shocks, and thus be given a chance to recover and meet their financial obligations while allowing workers in the meantime to engage in alternative employment. Instead, labor adjustment in BH has historically taken the form of: (a) excess workers stopping work at SOEs when such work does not exist, while (b) remaining nominally, or fictitiously, on the books of the enterprises and accumulating wage and social insurance arrears, and (c) for at least some of them, working in the informal sector. This awkward situation has been aided by the fact that labor regulations stipulate that the employer must retain a worker's workbook until separation of employment occurs, at which time he *must*

stamp it with the termination date (thus testifying that social insurance contributions have been paid) and return it to the worker. Therefore, the effects of a *legislative* vacuum (lacking policy for layoffs) are accentuated by an *administrative* vacuum (i.e. alternatives to work books) arising from outdated arrangements for tracking a worker's social insurance history.

**Box A: Selected New Analytical Findings on BH Labor Markets in this Report**

- There is no discernible impact on economy-wide earnings arising from those wage determination rules set out in collective agreements that can be identified for statistical analysis (including minimum wages and wage coefficients). This is consistent with the view that the labor market *today* might be more flexible than in the past.
- There is some evidence that the effect of education and seniority on earnings was more in line with regulations in the late 1990s than they are today. This is consistent with the view that the labor market is adjusting to rigid provisions through “regulatory evasion”.
- Tripartism is gradually expanding but the industrial relations system remains in a flux, and the social partners' representativeness is questionable. On the one hand, trade union membership remains heavily concentrated in the state-owned and mass privatized sector, albeit with declining influence. On the other hand, there is little union organization in the *de novo* private sector where private employers' associations are heavily concentrated. Hence employers' associations and trade unions represent different segments of the labor market.
- Payroll contributions as *share* of total labor costs are almost equal between the two Entities and on the low side by regional standards. However, wage levels (and subsequently, *total* labor costs) are high.

*Flexibility through non-enforcement of collective agreements is generally undesirable.* Non-enforcement of rigid regulations leads to informality, can provide opportunities for rents for officials, and creates uncertainty among employers and new investors, while it leaves workers without protection (such as social insurance coverage).<sup>3</sup>

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## Main policy directions for a more dynamic labor market in Bosnia-Herzegovina

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The analysis in the report points to the following four main areas of policy reforms in BH's labor markets.

**A. Create a leaner but more enforceable set of labor regulations**

- Allow for a gradual reduction of the minimum wage as a share of the average wage in the FBH;
- Introduce a youth minimum wage;
- Rationalize and simplify the system of “coefficients” and other aspects of wages, employment and benefit determination; and
- Reduce the duration of maternity leave and pay maternity benefits through the social insurance system (instead of effectively leaving it to individual employers).

**B. Review the system of payroll contributions**

- Integrate non-wage benefits into the taxable base in the FBH; and

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<sup>3</sup> This is consistent with experience from elsewhere in ECA. See World Bank (2005), “Enhancing Job Opportunities in Transition Economies of Europe and Central Asia”.

- Harmonize systems of payroll contributions and rates between the Entities.

#### C. Review systems of collective bargaining and wage determination

- Separate public sector wage determination from that in other sectors;
- Limit collective agreement coverage to those enterprises that are represented in bargaining;
- Define criteria for representation of social partners involved in tripartite bargaining;
- Create a State-level Economic and Social Council as a forum to discuss medium-term labor market and collective bargaining reforms.

#### D. Facilitate labor adjustment and stop the flow of new “fictitious” workers

- Promote enterprise restructuring and free up labor currently held up in fictitious and unproductive employment
- Develop an alternative to workbooks (for social insurance purposes); and
- Introduce legislation to address temporary layoffs.

#### E. Improve the statistical basis for labor market analysis

- Introduce a Labor Force Survey; and
- Increase capacity of the statistical offices.

This is an ambitious policy agenda which needs to have local ownership and careful sequencing. Its success will also depend on building administrative capacity to implement the reforms, addressing political economy considerations and undertaking statistically informed assessments.

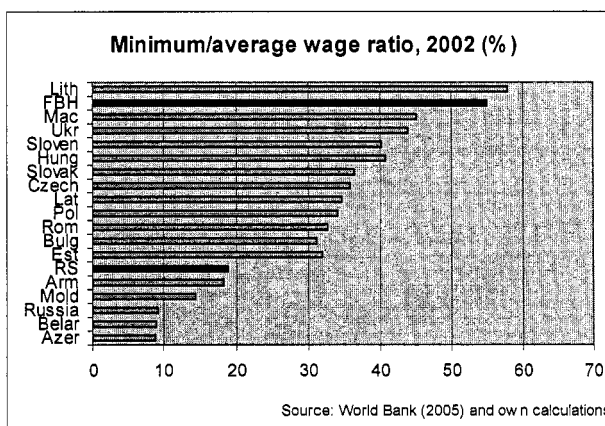
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## A. Create a leaner but more enforceable set of labor regulations

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### 1. Allow for a gradual reduction of the minimum wage as a share of the average wage in the FBH.

*The FBH has a high minimum wage in a regional context.* The FBH minimum wage is set by the new General Collective Agreement adopted in August 2005 at an hourly net rate of KM1.75, which as of June 2005 corresponds to 55 percent of the average wage in the economy – the same level as under the old GCA. Under the new regime, it is to be indexed to the cost of living, the retail price index and general developments in the economy and adjusted at least once per year by Government decree with the consensus of the social partners. Although the determination of the minimum wage is less straightforward in the RS, it has been lower than in the FBH and decreasing over time to the point that now stands at only around 20 percent of the net average wage. Despite these striking differences, the share of employees whose wages are below half the



respective average wage in each Entity is today about the same, and about 20 percent of FBH formal sector employees report earnings below the minimum wage. The current FBH minimum wage level as a share of the average wage is one of the highest in a regional comparison. However, the new GCA also introduces a provision which allows “in exceptional circumstances” branch collective agreements or company agreements to stipulate an alternative lower minimum

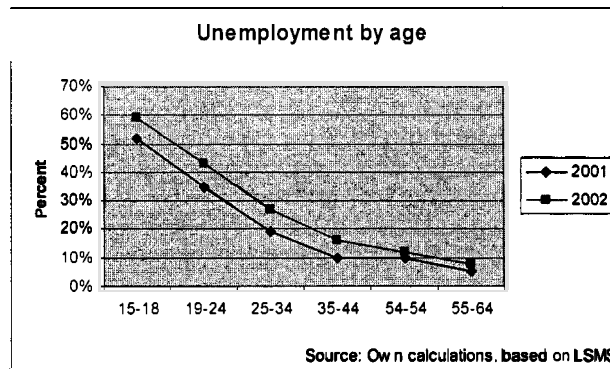
wage below KM 1.25 net per hour, which would represent 40 percent of the average wage as of June 2005. The introduction of such a lower minimum wage, even if limited to “exceptional circumstances”, could open the way for more wage flexibility especially in companies under stress and prevent the loss of formal sector jobs and a further informalization of the economy.

## 2. Introduce a separate youth minimum wage.

*Youth unemployment is high, and the average age of workers in formal employment has been increasing fast.* The youth in BH are finding it increasingly difficult to secure employment in the formal sector. Conventionally measured, unemployment among those in the 19-24 age group is almost 50 percent, while the self-reported unemployment rate among those aged 15-18 is reaching 75 percent. Of equal concern is the finding that more than a quarter of the 15-18 year olds are already out of school. Because the productivity of young workers is evidently lower than those with experience (at the same level/quality of education and other characteristics), setting a common minimum wage for both groups is bound to lead to the exclusion of the young from the formal labor market. This leads to a loss of output in the formal sector (by employing fewer young workers) and depresses wages in the informal sector (because of the relative labor supply increases in that sector). Setting a separate and lower minimum wage for the youth would facilitate their employment and will also increase total output in the economy.

## 3. Rationalize the system of coefficients and similar provisions in collective agreements.

*The branch collective agreements prescribe a public sector-like system of “coefficients”.* These are provisions binding only for those voluntarily participating in branch collective bargaining, and no law mandates their continuation. The Labor Laws also allow firms in bad financial standing (a term not precisely defined) to pay lower wages than those prescribed in the branch collective agreement. As the empirical analysis of this report shows, many of the prescribed wage increments (“coefficients”)<sup>4</sup> in collective agreements are evaded, as are various allowances. Rather than having a “comprehensive” system that is evaded or selectively applied, it is preferable to replace it by a less ambitious one that is transparent and enforced, benefiting workers and reducing uncertainty among employers. In a modern diversified economy with varying working conditions and lifelong learning, there is little justification for the mechanical linking of wages to workers’ characteristics. Although the majority of 40 or so detailed provisions in collective agreements can be maintained, others should be reconsidered by the



<sup>4</sup> Labor “coefficients” are included in Branch Collective Agreements (BCA) as proportional increases to the minimum wage to compensate for additional worker effort (e.g. heavy or complex work) or education and professional qualifications. Additional increases are granted on the basis of tenure (the “seniority” allowance) and other supplements, some relating to work effort (such as overtime or night work) and some to norms (for example, leave for blood donation or participation in sports).

social partners. Some provisions in collective agreements that can be candidates for possible reconsideration are listed in Box B.

#### 4. Reduce the duration of maternity leave and pay maternity benefits through the social insurance system (instead of effectively leaving it individual employers).

*The one year maternity leave duration in BH stands out in a European comparison, and can act as a barrier to female employment.* With female labor force participation low in BH, the authorities may want to review the legislation and shorten maternity leave duration. While maternity benefits are secured through general payroll contributions in the RS and thus do not create a specific disincentive for the employment of women by individual employers. However, although maternity benefits are in theory financed by the Cantonal social protection systems in the FBH, only Sarajevo Canton regularly pays maternity benefits. Anecdotal evidence suggests that, in practice, financing maternity benefit is often left to the employers.

#### Box B: Selected provisions of collective agreements that could be revisited:

- The *seniority premium* is currently portable between employers. However, opportunities for employment among jobseekers are reduced, if the wage the hiring employer *must* pay is higher than the one the job-seeker is prepared to accept. Thus, hiring wages above the minima provided by regulations should be negotiable between employers and workers and, if the experience of a worker justifies, he/she can be paid more.
- There is an automatic link between education and wages through the *education coefficients in wage determination*. However, many jobs involve multi-tasking and on-the job learning which is not reflected in such rigid wage-setting rules;
- There is no obvious justification for the mechanical requirement for *supervisors to have higher formal credentials than supervisees*.
- The RS collective agreements *cap occasional or temporary work* to certain numbers of days or hours per year. This has no obvious benefit to the workers, limits employers' flexibility and is difficult to police.
- There is a lack of mechanism for *insuring employers from stoppages or closure of activities* when no fault is involved so that an employer can meet his/her financial obligations to workers. This problem is currently "solved" by a unilateral obligation placed upon employers to meet their financial obligations even under such conditions (This provision has been removed in the new FBH GCA adopted in August 2005, but remains in the RS GCA). This can be more appropriately addressed by introducing voluntary arrangements among employers complemented by the development of supportive insurance provisions.
- Vague administrative requirements may determine that a worker is not eligible for health or disability pension benefits while in practice he/she may no longer be able to continue performing his/her tasks. As in the previous case, the (social) cost of this outcome is passed on to employers who are required to offer continuing employment.

## B. Review the system of payroll contributions

### 1. Integrate non-wage benefits into the social insurance/taxable base (in the FBH)

*In the FBH, non-wage benefits such as the hot meal allowance, transport allowance or holiday allowance are excluded from the taxable base for social insurance contributions.* This differs from the RS, as well as from international and regional practices, and reduces the base

upon which social insurance contributions are calculated. An additional effect of exempting employer-provided benefits in the FBH from the social insurance base is that the value of the effective minimum wage jumps to around 65 percent of the average wage (compared to the nominal 55 percent).

## 2. Harmonize the social insurance provisions between the two Entities

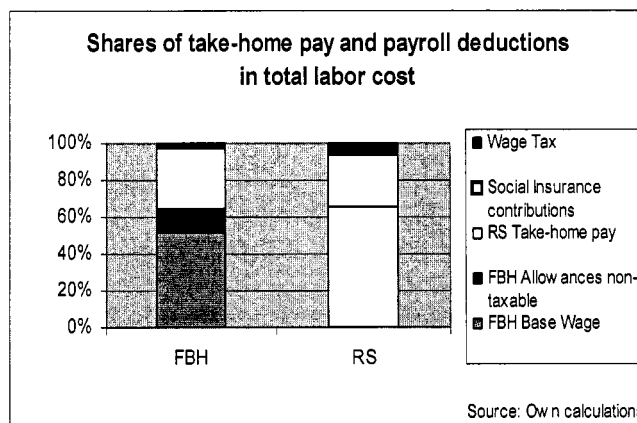
*There are substantial differences between the Entities' payroll contribution systems that accentuate duality between the Entities and the formal/informal sector.* Social insurance contributions and taxes are levied exclusively on employers in the RS, but are shared in the FBH. Although the real effects of this particular distinction might be insignificant, there are other differences that can have fiscal and social protection implications. One example is the aforementioned difference with respect to the taxable/social insurance base in the FBH (which excludes the value of allowances). Another one is an earmarked payroll deduction that finances child protection in the RS but is absent in the FBH. Additional differences arise from the composition of before- and after-tax earnings as well as the extent of informality between the two Entities (36 percent in the FBH and 49 percent in the RS). The common objective is to create a labor market that is seamless in its outcomes within each Entity and across both Entities. This does not imply that parallel or diverse regulatory provisions between the two Entities should be fully consolidated: the coexistence of separate laws does not necessarily impede the realization of a common market as the evidence from many federal systems in other parts of the world suggests. However, each Entity can benefit from better practices in the other and, in turn, reciprocate when its regulations are felt to be more appropriate. Such differences between the two Entities should be gradually reduced and eliminated, and both Entities should pay more attention to issues of compliance and to a better linking of contributions to benefits. This will increase both the willingness of workers to participate in social insurance schemes as well as their protection.

## C. Review collective bargaining and wage determination

### 1. Separate public sector wage setting from other sectors:

*The minimum wages prescribed by the current collective agreements and employment conditions apply equally across employers irrespective of corporate identity (such as state, cooperative, mixed or private).* As a rule most countries have separate laws on civil service employment including separate minimum wages and wage grids. Labor laws and general collective agreements may (and should) set minimum labor standards and rights and obligations applicable to everyone, with no regard to private or public sectors.

However, the separation of wage determination between civil servants and other workers rests on the premise that there are different underlying forces and conditions in the respective labor



markets. For example, the public sector is constrained by the fiscal envelope which is both an economic and political issue while the private sector is driven by competitive forces. In many cases, a sensible private sector decision implying closure of operations might neither be an option for the public sector nor even be desirable in the case of a public good. Overall, the compensation “package” should be comparable between the public and private sectors in order to ensure that the labor market is seamless across different sectors. This might require different specific provisions between the private and public sectors to compensate for differences in benefits (for example, in terms of employment security and social insurance entitlements). Wage determination for civil servants might, therefore, need to be conducted in agreements separate from the rest of the formal sector workers. However, given the high share of total public expenditure spent on public sector wages, the Government needs to ensure that the new civil service scales achieve savings or are at least fiscally neutral.

**2. Limit collective agreement coverage to those enterprises and workers who are voluntarily participating in bargaining.**

*To preserve the voluntary principle of tripartism, the Government could refrain from exercising its authority to extend collective agreement coverage to those who have not voluntarily signed them.* This holds in particular for the General Collective Agreements which are surprisingly detailed for general, economy-wide regulations and which are understood to be binding. In the FBH, the Labor Law provides that collective agreements bind only those employers and only the members of trade unions who have been represented in the bargaining. The RS law states that agreements are “mandatory” for those who were represented in the process but allows the same flexibility of participation as in the FBH. Thus, both Labor Laws already prescribe that collective agreements are binding only for those parties who have directly participated or have been represented in the process of concluding the agreements. Nevertheless, according to the current general collective agreement in the FBH, all employers, public and private, are in theory bound by the provisions of the *general* collective agreement. Similar ambiguity arises in the RS from the mandatory membership of companies in the Chamber of Commerce which has been the official representative of employers in the collective bargaining in the past. These ambiguities should be reconciled in a way that collective agreements do not impose obligations on those who have not agreed to be party to them.

**3. Define representativeness of social partners in tripartite bargaining.**

*The labor legislation in both Entities does not set out clear minimum membership criteria and verification procedures for the representativeness of the social partners in collective bargaining.* BH authorities should clarify such ambiguities by setting minimum representation standards. This would also clarify the role of the Government in the negotiation process - as at present the Government is represented (rightly) as Government but also as a principal employer (in the public sector) and a dominant representative of workers (the public sector still employs almost two-thirds of the formal labor force).

**4. Create a State-level Economic and Social Council as a forum to prepare medium-term labor market and collective bargaining reforms.**

*The level at which collective bargaining occurs can be a critical determinant of economic outcomes.* For example, a centralized system can adversely affect *macroeconomic* performance if it prescribes a high minimum wage that could risk starting an inflationary process. Similarly, decentralized collective bargaining can enhance or hinder *microeconomic* outcomes through its effects on productivity and profitability of various companies or different sectors. The international experience with respect to different industrial relations systems provides only suggestive guidance as to what level and kind of collective bargaining could be more appropriate for BH. However, Bosnia and Herzegovina’s economic transition is far from complete and



substantial enterprise sector adjustment still needs to take place. This suggests that the tripartite parties could be best served by allowing for more rather than less flexibility in the labor market that would promote better outcomes.

*This report recommends that the agreement on a future framework for collective bargaining be reached through a tripartite dialogue and based on more accurate data and careful economic analysis of the implications of legal and broader policy options.* A move from or to GCAs to or from BCAs or company-based agreements should be pursued on the basis of collating quality data, identifying relevant national and international experience, building analytical capacity and continuing social dialogue under the social-economic councils. This can be facilitated by the preparation of labor market strategies that can be undertaken by the Ministries of Labor in discussion with Entity ESCs or, as recommended by this report, a State-level ESC.

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## D. Facilitate labor adjustment and stop the flow of new “fictitious” workers

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### 1. Promote enterprise restructuring and free up labor currently held up in fictitious and unproductive employment

*The State-owned enterprise sector remains overstaffed, and there is evidence of “fictitious” and unproductive employment of workers.* Some workers, while formally employed in SOEs, are actually working in the informal sector, while others are lingering on in their enterprise in unproductive employment. While the full extent of “fictitious” employment and overstaffing across the enterprise sector as a whole is uncertain, enterprise surveys suggest that the SOE sector remains substantially overstaffed and is seen as providing a major obstacle to restructuring. This suggests that the authorities need to proceed with enterprise restructuring, including privatization and bankruptcy procedures, and release excess employment to allow for a reallocation of labor to more productive employment.

### 2. Develop an alternative to the workbooks as a means of keeping track of the workers’ social insurance history.

*The requirement for employers to retain an employee’s workbook until the point of separation creates and reinforces several rigidities in the labor market.* Designed for a labor market characterized by full-time and lifetime employment, the current workbook practice – which tracks in hard copy the employee’s employment history for social insurance purposes – has been proven to be a major *de facto* barrier to formal alternative forms of employment including part-time and temporary work and secondary employment. Under the current system, the employer is required to retain the employee’s workbook until the employment relationship ceases, at which time he has to return it to the employee duly stamped with the termination date. This practice of workbooks has contributed to the emergence of the “fictitious worker” problem: When employers cannot meet their obligations with respect to current wages, social insurance dues or severance payments, the workers naturally stop working for such employers. At the same time, while these employers are not in a position to meet their obligations and stamp the workbook, arrears start accumulating, creating a vicious circle and increasing their inability to settle. Alternative administrative arrangements for maintaining the social insurance records of workers urgently need to be explored and introduced. Reform measures over the medium term may involve the introduction of an integrated electronic employee registration database.

However, in the short term procedures could be amended to enable employees to withdraw workbooks, while retaining their claims on unpaid wages and social insurance contributions.

### **3. Introduce legislation to address temporary layoffs.**

*BH's legislation does not provide for layoffs, and a worker is generally treated as if he were "in" or "out" of full-time employment.* Although existing labor regulations provide for wage restraint in companies under financial stress, temporary employment adjustment remains limited in the absence of regulations for layoffs. If there were provisions in the legislation for an employee to be placed on temporary "lay off" status, that employee would no longer be prohibited from seeking lawful employment with a "secondary" employer, while remaining subject to recall once the "primary" employer is able to do so. Such a temporarily laid-off worker would have no break in social insurance contribution history for the period of layoff and would continue accumulating social insurance cover provided by the secondary employer. Addressing this legislative gap may prevent an employer's bankruptcy, while employees may also have a reasonable chance to return to their primary employer, if still desirable.

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## **E. Improve the statistical basis for labor market analysis**

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*The assessment of this report is that BH lacks the information basis for an objective assessment of the characteristics and trends of the labor market* and it is therefore recommended both that an annual Labor Force Survey be introduced and that the capacity of the Statistical Offices be increased. The need for relevant, adequate, and timely statistics is particularly desirable in the area of labor markets where policies and reforms typically involve winners and losers. The diverse fate of these two groups can be particularly acute *in the short run*, although adverse distributional effects of reforms can be neutralized, and in fact be reversed, in the long run. Therefore, an adequate statistical system is a prerequisite for the informed and timely design, implementation and monitoring of labor policies. This can avoid deadlocks in the dialogue arising from incorrect perceptions of reality (as is at times the situation in BH in certain areas) and can reduce industrial conflict.

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# CHAPTER 1: LABOR MARKET CHARACTERISTICS, WAGES AND LABOR COSTS

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## Introduction and Summary

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1. This chapter provides an overview of the broad characteristics and trends in the BH labor market. It examines, on one hand, quantitative aspects of employment (such as employment, unemployment and hours of work) and, on the other hand, the level of and changes in the aggregate wage as well as payroll deductions (the tax wedge). Although the data are far from ideal and at times provide a rather incomplete (and possibly unreliable) picture of the macro economy and the labor market, there are some observations that may more or less describe the situation.

2. **The labor market in Bosnia and Herzegovina still exhibits undesirable characteristics**, for example

- The *formal sector remains dominated by the public sector* that has no sustainable prospects for growth.
- *Most of the recent gains in employment come from the informal sector*; whose share increased from 37 percent in 2001 to more than 42 percent in 2004.
- The *wage levels are high in a comparative context*, especially for the young whose employment is characterized by the highest rates of unemployment and informality.
- *Unemployment remains high (at more than 20 percent of the labor force)* and is double or more that rate for younger workers.
- *Unemployment and informality is further exacerbated by low enrolment rates at successively higher levels of education*, especially for secondary education in which only 73 percent of the 15-18 year-olds are enrolled, 40 percent of whom are in vocational programs.
- *Reported wage increases are ahead of inflation and quite uniform across the two Entities* despite substantial differences in the two economies, for example, with respect to the structure of the economy and the wage setting mechanisms.
- *Aggregate wages in RS have grown more strongly than in FBH* – unlike what the more liberal minimum wage setting mechanism there would have implied.

3. **This suggests that the restructuring and the transition of the economy of Bosnia and Herzegovina into a dynamic market economy is far from complete and much remains to be done at the broad economic policy level** (including enterprise restructuring, privatization and business environment improvements). Specific labor market policies may, of course, help in many different ways but their effect would be marginal until sustainable growth resumes. The big issue, therefore, seems to be the size of the overall productive base of the economy.

4. **Despite the difficult state of the Bosnian economy and the labor market, there are some encouraging signs of changes**, although some might be rather fragile in practice, if not the result of poor quality of data:

- *The labor force participation rate has increased significantly since 2001* (by more than 20 percent by 2004) and now stands at just under 60 percent (compared to 48 percent in 2001);
- Despite the increase in the labor force participation rate, the *unemployment rate conventionally defined has been virtually unchanged since 2002*; this is also the case for the self-reported unemployment which appears to have experienced a slight decline over time;
- The *employment rate, a more reliable indicator, has shown a clearer tendency to increase* (from 40 to 46 percent between 2001 and 2004) and this has provided employment for nearly 150,000 additional workers;
- A good sign is *the increase in average number of hours worked by workers*, indicating that the rise in employment rate has not been at the expense of full-time employment;
- The *increase in employment and hours of work has also been accompanied by increases in productivity*;
- In comparison to the RS, formally reported *wage increases in relation to inflation have been less excessive in the FBH* where “spiraling inflation processes” might have been expected due to the mechanical indexation of the minimum wage;
- *Despite a substantial loss of 120,000 jobs in SOEs since 2001, net formal sector employment appears to have increased overall by about 40,000 jobs.*
- *Although the absolute level of wages is one of the highest among a comparable group of countries, the tax wedge in BH is in the middle range of ECA countries*, while changes in wages over time have been more aligned with inflation and GDP growth in BH than in neighboring countries.

5. **Conclusions:** The above results and findings presented further in this report suggest that:

- *Labor market improvements require increases in aggregate demand and continued economic growth.* This calls for: (a) broad based economic reforms at the macro level, supplemented by labor markets policies, in particular aiming at wage restraint and promoting labor market flexibility; and (b) a better educated and trained labor force.
- The *system of wage determination is probably binding for some sectors but less so for an economy in which the informal sector is large and rising*; still, there is a need for reforming the current method of determination of minimum wages in the FBH and also introducing a separate rate for the youth.
- *Social insurance contributions are not excessively high* and the more relevant issues may be: (a) harmonization of the Entity Laws on Social Insurance (with respect to contribution rates and the coverage of benefits); (b) broadening of the contributions base (by treating non-wage benefits as part of the worker’s total compensation); and (c) more effective use of revenues (which will increase the willingness of workers to participate in social insurance schemes). Reforms in these three areas can boost labor mobility and reduce the extent of informality in the labor market, thereby increasing worker protection against the risks of poor health, old age and unemployment.

## A. Employment Characteristics and Trends

### *Broad Employment and Unemployment*

6. Despite conflicting evidence from different administrative and survey data, total formal sector employment in BH has probably increased over time (see Table 1 in the overview chapter and Table 1.1 below). Formal employment in agriculture has been stagnant but the sector employs very few workers (approximately 10,000 in each Entity). However, the formal manufacturing sector has lost about 10 percent of its workers since the late-1990s. In the same period, formal employment in services increased by about 15 percent in the RS, but there were no employment gains for this sector the FBH (Appendix Table A1.1). It is likely that formal employment has contributed to some of the net gains in the FBH; however, this does not appear to have been the case in the RS (see earlier table 1 in the Overview section). Overall, it appears that the formal sector might not have been as lethargic as previously thought: Despite a substantial loss of 120,000 workers in SOEs since 2001, formal sector employment appears to have increased by about 40,000 jobs between 2001 and 2004. However, as mentioned, the picture is far from being definite at this point, given data contradictions. Table 1.1 presents differing employment and productivity changes based both on officially published aggregate employment data from the Statistical Institutes and on data on paid employment. It shows how much labor market analysis in BH is complicated by data limitations. It has to be noted that paid employment data is more in line with LSMS-based estimates of a 19 percent employment increase between 2001 and 2004 in the FBH and an 8 percent decline in the RS. The estimates based on paid employment suggest strong productivity growth in both Entities between 1999 and 2000, followed by a flattening out and decline in FBH and by further growth in RS in recent years. Lastly, the aggregate trends conceal employment variations between industries. For example, as Table 1.1 shows, productivity in RS manufacturing appears to have experienced a strong upward trend, compared to a fall in the FBH, which is driven by strong labor shedding in the RS manufacturing sector.

**Table 1.1 Formal Paid Employment and Productivity 1999-2004 (Index 1999=100)**

	1999	2000	2001	2002	2003	2004
Formal officially reported employment						
FBH	100	110	109	106	104	104
RS	100	103	100	106	108	107
Productivity based on formal officially reported employment						
FBH	100	108	111	131	136	154
RS	100	107	97	95	99	111
Formal Paid Employment						
FBH	100	83	93	101	103	124
RS	100	91	86	91	85	91
Productivity based on paid employment						
FBH	100	132	120	126	126	118
RS	100	121	113	111	126	131
Formal paid manufacturing employment						
FBH	100	116	129	145	145	170
RS	100	99	81	87	75	73
Productivity based on paid manufacturing employment						

FBH	100	93	95	97	101	99
RS	100	121	121	127	147	173

Source: Entity Statistical Institutes; productivity: Bank staff calculations; Notes: In 2004, formal employment was 388,000 in the FBH and 237,000 in the RS in 2004 (total for BH: 625,000), while formal paid employment was 283,700 in FBH and 96,600 in RS (total for BH: 380,400); According to the LSMS 2001 and 2004, formal employment in the FBH increased by 19% but declined by 8% in the RS;

7. **Despite recent shrinking, the public sector remains large, but its prospects are anemic.** There has been a heavy hemorrhage of employment in the state-owned enterprises, and the privatization of large SOEs *per se* has been slow. The share of employment in SOEs to total employment fell from 37 to 20 percent between 2001 and 2004. Today only about 220,000 workers are employed in SOEs in both Entities, compared to more than 350,000 three years ago.<sup>5</sup> However, the public sector's share in total employment still stood at 42 percent in 2003, down from 52 percent in 2001. Conversely, the private sector's employment share has increased from 34 percent in 2001 to 40 percent in 2003. Thus, most of the employment gains have come from increases in the informal sector (see next section).

8. **Labor force participation rate in BH has been on the increase.** To the extent that the LSMS provides a relatively accurate picture of the labor market, the traditionally low labor force participation rate in BH is steadily increasing (Table 1.2). An encouraging feature is that the employment rate (which is typically measured more accurately than the unemployment rate) is also increasing consistently. The unemployment rate seems either to have been stabilized (at a high rate), or to be slightly decreasing, if the self-reported unemployment rate is considered.

**Table 1.2 Main Labor Markets Indicators**

In percent	2001	2002	2003	2004
Unemployment Rate	16	22	n.a.	22
Self-reported Unemployment Rate	33	31	30	na
Employment Rate	40	42	43	46
Participation Rate (U+E)	48	53	n.a.	59
Participation Rate (self-reported U+E)	60	61	62	na
Share of formal (to total) employment	63	61	na	58
Total employment (,000)	1,000			1,149

Source: Own calculations based on LSMS and *Poverty and the Labor Market in BH* (2005)

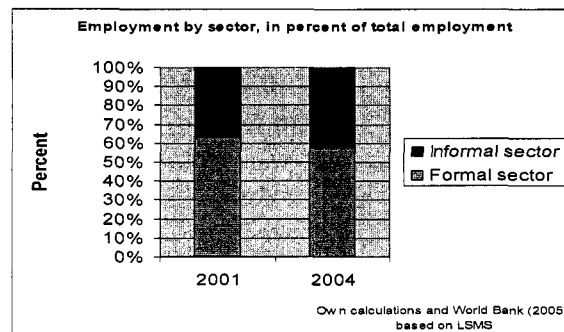
### ***Informal Employment***

9. **The share of informal employment is high, and increasing.** The share of the informal sector in total BH employment increased from 37 to 42 percent between 2001 and 2004, jumping from 41 to 49 percent in the RS and from 33 to 36 percent in the FBH. In terms of numbers, net employment in the informal sector increased by about 111,000 overall – with about 70,000 new jobs in the informal sector in the FBH and nearly 40,000 in the RS. Figure 1.1 summarizes the aggregate picture between 2001 and 2004 (see also earlier Table 1 in the Overview section and Appendix Table A1.2). The share of women in total (male and female) informal employment has been around one-third, and this is practically identical to the share of women in total formal employment in 2001. Young workers, however, are disproportionately employed in the informal sector. In 2001, the share of informal workers who were young (below 25 years) was nearly 20

<sup>5</sup> See *Poverty and the Labor Market in BH 2001 to 2004* (World Bank, 2005)

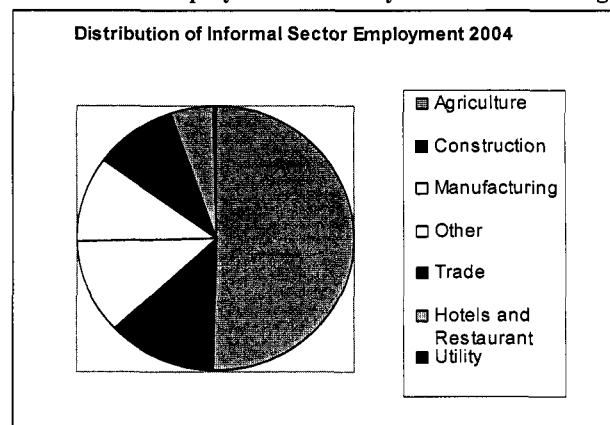
percent, compared to a share of this group in formal employment of less than six percent. Similarly, low-skilled workers have a higher share of informal employment compared to formal employment. The shares of women, youth and low skilled in informal employment remained practically unchanged for the period covered by the LSMS.

**Figure 1.1 The share of informal sector employment has been on the rise in recent years**



10. **The majority of informal workers in 2001 were employed by private employers** (52 percent). The rest were self-employed (25 percent) and contributing family members. By 2003 the share of informal private sector employees decreased to 40 percent, which suggests that most of the employment gains have probably come from defensive self-employment family mechanisms rather than the expansion of small firms.

**Figure 1.2 Informal employment is heavily concentrated in agriculture**



Source: World Bank (2005)

11. **The largest informal employer is agriculture.** In 2001 the agriculture sector employed 40 percent of all informal workers, followed by construction (19 percent), and manufacturing and trade (with 9 percent each). By 2004, the share of agriculture in overall informal employment increased to 50 percent (see Figure 1.2). As for the employment status, in 2001 the majority of informal workers were employed by private employers (52 percent), while around 25 percent were self-employed and about one-fifth were contributing family members. In 2002 and 2003, the share of informal private sector employees decreased to 42 and 40 percent respectively. The proportion of informal self-employed increased, particularly in 2002, while the proportion of contributing family members increased in 2003. This reinforces the previous observation about the limited role for employment creation that small firms appear to have recently played, as does

the fact that the share of construction and manufacturing in informal employment decreased by 15 percent and 8 percent, respectively, over the last three years.

### *The Employment Rate and Hours of Work*

12. **The overall employment rate<sup>6</sup> in BH increased from 40 percent to 46 percent between 2001 and 2004, and this increase has not been accompanied by a reduction in the hours worked.** As Appendix Table A1.2 shows, the only subgroup that experienced a decline in the employment rate was men in the RS where the employment went from 61 percent to 58 percent. Nonetheless, this group retains the highest employment rate. The employment rate of men in the FBH increased from 48 percent to 55 percent, closing the gap with the employment rate of men in the RS. Employment rates for women increased by around 10 percent, from 23 to 26 percent in the FBH and from 33 to 37 percent in the RS. Overall, the employment rate (43 percent) is considered to be low, with even lower rates in the FBH (40%) compared to the RS (48%). A positive sign is that increases in the employment rate have not been accompanied by decreases in hours worked (Table 1.3). The percentage of all workers reporting more than 40 hours worked per week increased steadily in the three rounds of the LSMS (2001, 2002, 2003) from 88 percent to 90 percent and 92 percent.

**Table 1.3 Increases in the employment rate have not been accompanied by a decrease in hours worked - Distribution in percent of workers according to weekly hours worked**

Hours	2001	2002	2003
5	1	1	1
10	2	1	1
20	5	4	3
30	4	4	3
40	33	38	43
50	40	33	31
60	16	19	18
All	100	100	100
N	2626	2803	2805

Source: Own calculations based on LSMS

### *Unemployment*

13. **The conventional unemployment rate<sup>7</sup> was 16 percent in 2001 but increased to 22 percent in 2002** and has remained at this level since (Table 1.2). To the extent that these figures are accurate, they represent a significant increase. The rates are higher for (a) women, (b) in the FBH compared to the RS and (c) the youth (below 25) and older workers (above 55). It is not possible to calculate the conventional unemployment rate from the LSMS 2003. Based on information on the self-reported unemployed, the unemployment rate in BH declined from 33 percent 2001 to 31 percent in 2002 and 30 percent in 2003 (Table 1.2). These changes are contrary to those based on the conventional unemployment rate and mask the fact that the rate from men declined in the FBH (from 35 percent to 27 percent) but increased in the RS (from 26 percent to 30 percent) (Appendix Table A1.2). For women, the converse is true: self-reported unemployment rate declined in the RS (from 36 percent to 30 percent) but slightly increased in

<sup>6</sup> The employment rate is the share of employed workers in the working age population (15-64).

<sup>7</sup> The conventional definition of unemployment refers to those not employed and willing to work, seeking work, and being available for work.



the FBH (from 36 percent to 38 percent). These changes are, however, rather small and possibly erratic.<sup>8</sup>

14. **Youth unemployment rates are exceptionally high.** A more definitive conclusion relates to the unemployment of the youth (below the age of 25). The youth face exceptionally high unemployment rates in excess of 50 percent on both counts of unemployment (conventional and self-reporting). On the other hand, unemployment generally decreases with higher education attainment. It is below 10 percent for those with university education compared to 30-40 percent for those with primary education only (Table 1.4).

**Table 1.4 Employment and Unemployment Rate, by Age and Education**

in percent	Unemployment Rate		Self-reported Unemployment Rate			Employment Rate		
	2001	2002	2001	2002	2003	2001	2002	2003
<b>Age</b>								
15-18	52.5	59.3	75.4	77.9	73.0	6.7	8.5	9.3
19-24	34.8	43.3	54.4	54.0	51.5	30.8	30.6	34.1
25-34	19.0	27.0	38.3	36.8	35.0	46.8	47.9	51.2
35-44	10.5	16.3	23.4	23.9	23.5	57.6	58.7	57.8
45-54	9.9	12.0	18.9	17.1	18.6	53.8	56.7	56.5
55-64	5.2	7.9	25.9	15.9	24.2	21.9	26.5	25.5
<b>Education</b>								
Unfinished elementary	15.3	15.5	34.2	23.7	25.2	22.8	27.3	27.6
Elementary	20.2	28.1	40.2	40.8	41.2	26.6	29.9	30.2
Vocational	17.4	22.3	33.6	33.0	30.5	53.5	55.0	56.2
High School	14.8	21.4	31.6	28.6	27.8	44.7	46.7	50.4
University (2y)	6.8	9.0	12.8	12.0	12.9	69.0	67.0	65.0
University (4y)	2.8	5.0	8.5	4.4	6.0	82.7	84.1	82.7

Source: Own calculations based on LSMS

### *A Digression on Education*

15. **The high unemployment rates of the youth can be related to the low educational enrollment rates at successively higher levels of education.** In this respect, it should be of great concern that only 73 percent of those in the 15-18 year-age group are enrolled in secondary education. Most European countries have net secondary enrollment rates of between 85-95 percent. In addition, a disproportionate share (40 percent) of students who stay on in secondary education is in vocational programs. As shown in table 1.4, those with vocational education have higher unemployment rates and, as shown in the analysis of earnings (next chapter), their earnings are lower than those with general secondary education. Focusing on the youth in households living below the poverty line, their enrollment rate in secondary education falls to only 57 percent. To make matters worse, children from poor families have a much greater tendency to be enrolled in vocational programs that usually lead to higher unemployment and lower earnings (see Chapter 2). In addition, whereas the net enrolment rate for the non-poor in

<sup>8</sup> The earlier LSMS surveys included information on “discouraged workers”, that is, those unemployed who were no longer seeking work because they believed that no jobs were available. For example, in 2001 discouraged workers accounted for 37 percent of the unemployed. However, it is not possible to classify individuals as “discouraged” for LSMS 2003.

the tertiary age group (age 19-23) is 27 percent, it is only 9 percent for youth from households with incomes below the poverty line.<sup>9</sup>

***Employment and Unemployment: The Labor Force Participation Rate***

16. **The labor force participation rate was low in 2001 (47.8 percent), but increased to 59 percent in 2004.** The labor force participation rate using self-reported unemployment can be calculated for the three waves<sup>10</sup> and is estimated to have increased from 59.7 percent in 2001 to 62.3 percent in 2003. Thus, unlike in the case of unemployment where the conventional count and results based on self-reporting pointed in different directions, both estimates of the labor force participation rates point reassuringly in the same direction.

**Table 1.5a Labor Force Participation Rates by Entity and Gender, 2002-2003**

	2002			2003		
	BH	FBH	RS	BH	FBH	RS
LFPR 1						
Total	53.7	47.8	61.4	na	Na	na
Men	69.4	65.0	74.7	na	Na	na
Women	38.4	31.6	47.6	na	Na	na
LFPR 2						
Total	61.6	56.1	68.7	62.3	58.1	67.8
Men	77.5	73.4	82.7	78.5	75.0	82.9
Women	46.0	39.9	54.3	46.5	42.2	52.2
LFPR2: Change 2002 – 2003						
Total				1.1%	3.6%	-1.3%
Men				1.3%	2.2%	0.2%
Women				1.1%	5.8%	-3.9%

LFPR1: Based on Unemployment Conventionally Measured;

LFPR2: Based on Self-reported Unemployment

Source: LSMS own calculations

17. **Despite these gains, the labor force participation rate in BH is low in a regional context** where the corresponding rate is in excess of 60 percent in some economies. Most of the difference is due to the low labor force participation of women in BH. For example, female labor participation rates are only 34 percent in BH compared with 57 percent in Romania. However, more recent evidence from 2004 (on a comparable statistical basis) suggests that female labor force participation rate rose by more than 30 percent (compared to an increase of 18 percent for men). In the FBH (where participation rates have been traditionally low), female participation increased by 32 percent, compared to 14 percent in the RS.

<sup>9</sup> CEM, 2005

<sup>10</sup> With the absence of information on conventional labor force participation rate for 2003 (due to a routing error on the questions about unemployment in the survey) comparisons with 2003 cannot be made..

**Table 1.5b: Labor Force Participation Rates by Entity and Gender 2001-2004**

	2001	2002	2004
All	48.1	53.3	59.0
FBH	42.2	47.1	55.8
RS	55.4	60.9	63.0
Men	63.6	68.9	75.0
Women	32.9	38.0	43.1

Note: based on conventionally measured unemployment

Source: Poverty and the LM in BH, 2001-2004

## B. Wages and Labor Costs

### *Aggregate Wages*

18. The difficulty of the labor market to generate jobs, even at the relatively low rates of employment observed in BH, has been traditionally linked to rising labor costs and high social security contributions and labor taxes. Both are examined below at an aggregate level, while a more detailed presentation can be found the next two chapters.

**Table 1.6 Annual rates of growth in economy-wide nominal wages and Inflation between specific years and 2003 or 2004**

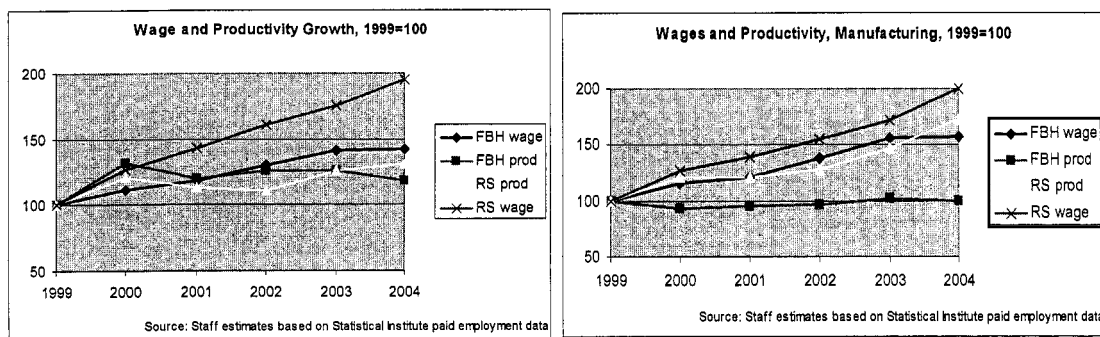
Until 2004	1999/04	2000/04	2001/04	2002/04	2003/04
RS					
Wages	14%	11%	11%	10%	11%
CPI	5%	3%	1%	2%	1%
Difference	9%	9%	10%	9%	10%
FBH					
Wages	7%	7%	6%	5%	1%
CPI	1%	1%	1%	0%	0%
Difference	6%	6%	6%	5%	1%
Until 2003	1999/03	2000/03	2001/03	2002/03	Na
RS					
Wages	15%	12%	11%	9%	Na
CPI	6%	3%	2%	2%	Na
Differences	9%	8%	9%	7%	Na
FBH					
Wages	9%	9%	9%	10%	Na
CPI	1%	1%	1%	1%	Na
Differences	8%	7%	8%	9%	Na

Source: Bank staff calculations

19. **Indeed, the aggregate wage has been increasing much faster than inflation and this is true for both Entities** (Table 1.6). While the issue of wage increases ahead of inflation changes is uncontestable, some additional observations are listed below also with reference to the aggregate level. The choice of period is critical in the sense that there can be significant variation in the estimates of wages and inflation depending on the choice of the start year and end year. For example, by changing the final year (from 2004 to 2003), the difference between the changes in wages and changes in inflation in the FBH increases by nearly 50 percent. One safe conclusion

is, therefore, that the statistical basis in BH is in need of urgent improvement. This point is pursued further in the next chapter when administrative data on wages are compared with those from surveys.

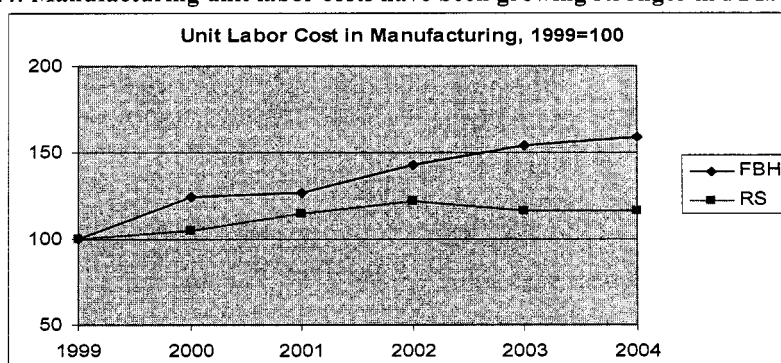
**Figure 1.3 Aggregate wages appear to have outgrown productivity in recent years in both Entities, although not so in the RS manufacturing sector**



Source: Own calculations based on paid employment data from Statistical Institutes

20. **Aggregate wages have been growing more rapidly in RS than in FBH and faster than productivity in both Entities.**<sup>11</sup> The minimum wage setting mechanism in the FBH has been charged for creating a wage/inflation spiral, which should be absent in the RS where minimum wages are too low to be binding. However, as Table 1.7 indicates, the aggregate average wage has increased faster in the RS than in the FBH between 1999 and 2004. Also, as shown in the next chapter, although minimum wages are set in direct relation to the average wage in the FBH, many low-paying industries in the RS have seen their wages rising faster than average, and in fact more than in the FBH (Appendix Tables A1.3 and A1.4). Moreover, while data limitations prevent definitive analysis of productivity developments in BH, it appears that RS wages have outgrown productivity across the economy as a whole, while this has been less so in FBH. In contrast, as Figure 1.3 shows, productivity in the RS manufacturing sector appears to have risen strongly in recent years and in line with wages after 2002, while in FBH wages have outgrown stagnant productivity.

**Figure 1.4: Manufacturing unit labor costs have been growing stronger in FBH than in RS**



Source: Bank staff calculations based on Statistical Institute paid employment data

<sup>11</sup> The reported increases in productivity may be somewhat inflated to the extent that they fail to take into account the recent increase in average hours worked (see Table 1.3).

21. **As a result, unit labor costs in the manufacturing sector have been rising in recent years in both Entities.** However, due to stronger productivity increases in the RS, unit labor costs there have increased by less than in the FBH and appear to have actually decreased since 2002. (see Figure 1.4).

**Table 1.7 Changes in Average Net Monthly Wages (in KM and Index 100=1999)**

Year	FBH			RS		
	AW	AW Index	CPI	AW	AW Index	CPI
1999	375	100	100	216	100	100
2000	413	111	102	274	127	114
2001	443	118	104	309	143	122
2002	483	129	104	347	161	124
2003	529	141	104	379	176	126
2004	533	142	105	422	196	128

Source: Own calculations based on Statistical Institute data

22. **Finally, in a comparative context during the last five years, BH seems to have had rather low increases in wages compared to other regional economies.** Table 1.8 presents comparative average net wage data from countries in South Eastern Europe. While all the above observations are conditional on the quality of data, and despite the fact that BH does not stand out as an undesirable negative outlier in a comparative context, the fact remains that BH has the second highest average net wage (after Croatia).

**Table 1.8 Average net wage in EUR for SEE Countries**

	2000	2004	Rank	Annual % change	Rank
Albania	99.1	169.3	6.0	14.3%	3
Bosnia and Herzegovina	191.2	258.2	2.0	7.8%	5
Bulgaria	94.9	122.6	7.0	6.6%	6
Croatia	435.4	556.6	1.0	6.3%	7
Macedonia	172.4	201.0	3.0	3.9%	8
Montenegro	96.3	195.9	4.0	19.4%	2
Romania	107.2	147.2	8.0	8.3%	4
Serbia	45.4	193.0	5.0	43.6%	1

Notes: Albania: public sector wages only are included; Bosnia and Herzegovina - this simple average for data in Republika Srpska and Federation of B&H; Bulgaria - data for 2004 are for Q4 only; Montenegro.

\* net wage doesn't include allowances for food, transport etc.

Source: Bank staff calculations

### **Minimum Wages**

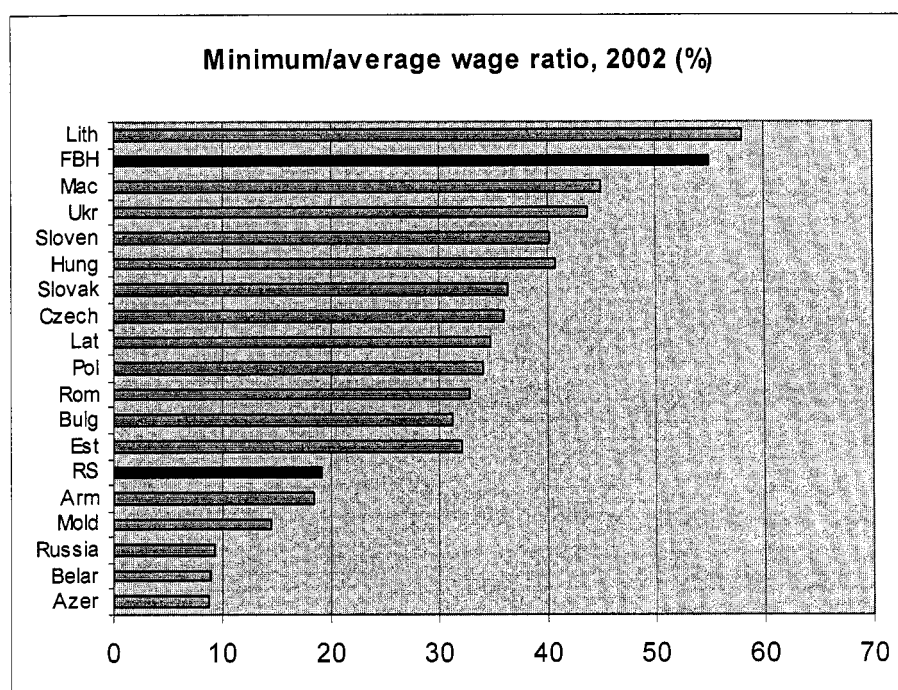
23. **The Labor Law in both Entities delegates the determination of minimum wages to the General Collective Agreements (GCA).** In the FBH, the GCA adopted in August 2005 prescribes a net hourly minimum wage of KM 1.75, which corresponds to a monthly minimum wage of KM 308<sup>12</sup>. This represents 55 percent of the FBH average monthly wage in the month of June 2005 of KM 556.42 and excludes benefits wage allowances. This is the same level as that prescribed under the old GCA which set the minimum wage mechanically at 55 percent of the

<sup>12</sup> The August 2005 FBH General Collective Agreement also introduces a provision, according to which "in exceptional circumstances" branch collective agreements or company agreements can stipulate conditions, level, method and periods of determination of a minimum wage below KM 1.25 net per hour.

average wage, resulting in a continuous average wage/minimum wage indexation spiral. In contrast, the new GCA stipulates that the hourly minimum wage “is adjusted with increases in the costs of living, growth of retail prices and overall economic development” at least once per year by a decree of the FBH Government on the basis of harmonized positions of social partners in the ESC for the territory of the FBH<sup>13</sup>. The determination of the minimum wage is less straightforward in the RS, but comes to around 20 percent of the gross average wage (including benefits). For more detailed analysis of the minimum wage determination, see chapter 3 of this report.

24. **The minimum wage rate in the FBH is one of the highest among the transition countries in Europe and Central Asia.** In a comparative context, the minimum wages in the FBH are second only to those of Lithuania, and are far ahead the ratio of minimum to average wages in more than one dozen comparators (Figure 1.5).<sup>14</sup> In contrast, the minimum wages in the RS are among the lowest in the region.

**Figure 1.5: The FBH has one of the highest minimum to average wage ratio in Europe and Central Asia**



Source: TransMonee and Bank staff calculations for ECA Labor Market Study

25. **While nominal minimum wages are set at a high level in the FBH, evasion also appears to be relatively high.** A caveat here is that the ratios of minimum to average wages are often nominal, rather than real, in the sense that the book value of minimum wages might not relate much to the actually paid minimum wages in the economy. Nevertheless, while nominal minimum wages are set at a high level in the FBH, evasion also seems to be relatively high.

<sup>13</sup> In contrast, ILO Convention 131 (Minimum Wage Fixing Convention: 1970) provides for taking into account both the needs of workers and their families, the general level of wages, the cost of living, existence of social security benefits and the relative living standards of other social groups as well as economic factors, including the requirements of economic development, levels of productivity and effects on employment/unemployment.

<sup>14</sup> For comparison, the ratios of minimum to average wages for developed countries range from 0.71 in Italy, to over 0.6 in Austria and Norway, and to below 0.45 in Spain, United Kingdom, Canada, and United States.

Perhaps more important is the finding that the percentage of formal sector employees who receive less than 50 percent of the average wage is very similar in the two Entities (for details see Chapter 2 and Tables A1.5a and A1.5b).

26. **In conclusion, it seems that the problem in BH has more to do with a (historically) high level of wages rather than with recent changes in wages per se.** The solution to addressing high levels of wages is to increase productivity. However, given the slow gains in productivity, real wage growth will need to be moderated, while other components of labor costs also need to be examined. The latter is done in the following section with respect to social insurance contributions and wage taxes (the tax wedge).

#### *The Tax Wedge: Payroll Deductions for Social Insurance and Taxes*

27. **Each Entity has a different system of social insurance and payroll taxation, with differing taxable bases and differing definitions of “net” and “gross” wages** (see Box 1.1). The terms “gross” and “net” wages are used in a somewhat counterintuitive way in BH, whereby “net” wages include benefits in the RS while “gross” wages exclude them in the FBH. There are also additional differences between the two Entities with respect to scope of social insurance (for example, whether maternity issues are covered or not) as well as the level of contributions and administrative matters. These differences may produce some misunderstanding and lead to the miscalculation of the tax wedge and are further discussed below.

28. **More specifically, in the RS, social insurance contributions and taxes on wages are levied on the “net” wage, defined as the individual’s take-home pay plus various supplements such as the hot meal allowance and the transport allowance.** Contributions are levied only on employers. The contribution rate for pension and disability insurance is 24 percent of the net wage, 15 percent for health, 1 percent for unemployment insurance and 2 percent for child protection (which also funds maternity leave). The tax rate is 10 percent and levied, as in the case of social insurance contributions, on the net wage. Thus the payroll deductions as a percentage of the “RS net wage” is 52 percent (i.e.  $24\%+15\%+1\%+2\%+10\%$ ) and corresponds to row 7 divided by row 4 in the last column of Table 1.9.

29. **In contrast, the calculation of payroll deductions for social insurance and taxes in the FBH excludes wage allowances from the taxable base.** They are levied on both the employer and the employee, although not in equal proportions. For example, the rates for pension insurance are 24 percent (7 percent from employers and 17 percent from employees), 17 percent for health (4 percent from employers and 13 percent from employees) and 2.5 percent for unemployment insurance (0.5 percent and 2 percent from employers and employees, respectively). They are all levied on the “gross” wage, which is defined as the employee’s wage plus the employee’s share in the social insurance contribution but excluding allowances such as for transport or meals. On the other hand, the tax on wages is set at 5 percent of the employee wage (which is defined as the FBH “net” wage, without the wage allowances)<sup>15</sup> and accrues to the Cantons. This rate, as expressed as based on “gross”, is 3.8 percent. Thus the payroll deductions as a percentage of the “FBH gross wage” are 47.3 percent ( $24\%+17\%+2.5\%+3.8\%$ ) and as a percentage of the “FBH net wages” 68 percent (row 7 divided by row 1 in Table 1.9).

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<sup>15</sup> Thus, allowances (such as hot meal and holiday allowances) are not taxable in the FBH.

#### Box 1.1 Clarifying terms

Various terms can be used in different ways and also measured differently. The use of the terms “net” and “gross” wages and the definition of the social insurance base in BH is a case in point.

In the RS, net wages refer to the individual’s take-home pay (and including wage allowances such as the hot meal allowance and others).

- Employer contributions and wages taxes are levied on the net wage (pay plus allowances) and are passed from the employer directly to the authorities;
- The average industrial wages reported by the RS Statistical Office refer to net wage only and exclude social insurance contributions.

In the FBH, gross wages refer to the employee’s wage (excluding wage allowances such as the hot meal allowance and others) plus the employee’s share in the social insurance contributions.

- The wage tax of 5 percent, however, is levied on the employee wage (which is defined in the FBH as the “net” wage, without the wage allowances) and accrues to the Cantons.
- Allowances such as hot meal and holiday allowances are not taxable.
- The average industrial wages reported by the FBH Statistical Office refer to the “net” wages.

30. **Despite these differences in terminology and apparent discrepancy in the tax wedge between the two Entities, the tax wedge conventionally calculated<sup>16</sup> is comparable in the two Entities** (last row, Table 1.9) and comes to about one-third of labor costs. However, it varies in the FBH for different levels of wages since various allowances (such as those for hot meal and transport) are linked to the average wage rather than the individual wage.<sup>17</sup> This corresponds to “flat rate” benefits, with the lower paid workers benefiting more. The tax wedge in the FBH is therefore progressive, a not-undesirable feature of social insurance schemes. However, for average values of wages in the two Entities and based on current regulatory provisions the tax wedge is the same at around 34 percent. Anecdotal evidence from workplaces across BH suggests that allowances such as hot meal, transport or annual leave allowances are not always paid, or paid at lower levels than prescribed by the general and branch collective agreements. This suggests that in reality the tax wedge in the FBH may be higher than 34 percent and closer to 40 percent – the rate if allowances are excluded (Table 1.9, row 11).

<sup>16</sup> The tax wedge on labor relates to the differences between the employer’s total labor cost and the individual’s take-home pay and is defined as:  $\text{tax wedge} = 100 \times (\text{total labor cost} - \text{take-home pay}) / \text{total labor cost}$ .

<sup>17</sup> The data in Table 1.9 are based on the average wage of December 2004.



**Table 1.9 Calculation of the Tax Wedge in RS and FBH, 2004**

		FBH				RS
		Minimum Wage	Average wage	2 x average wage	5 x average wage	
<b>Take home</b>						
1	Base wage KM	<b>299</b>	<b>545</b>	<b>1090</b>	<b>2725</b>	*
2	Hot meal allowance	136	136	136	136	*
3	Transport allowance	50	50	50	50	*
4 (1+2+3)	Net wage (KM+allowances)	<b>485</b>	<b>731</b>	<b>1276</b>	<b>2911</b>	<b>485</b>
<b>Contributions</b>						
5	SS	191	349	697	1743	204
6	Tax	15	27	55	136	48
7 (5+6)	Total deductions	206	376	752	1879	252
8 Memo item	Social security base FBH [Row (1)/0,68]	440	801	1603	4007	Na
<b>Labor costs</b>						
9 (1+7)	Excluding allowances	505	921	1842	4604	737
10 (4+7)	Including allowances	691	1107	2028	4790	737
<b>Tax wedge</b>						
11 (7/9)	Excluding allowances	40%	40%	40%	40%	34%
12 (7/10)	Including allowances	30%	34%	37%	39%	34%

Notes:

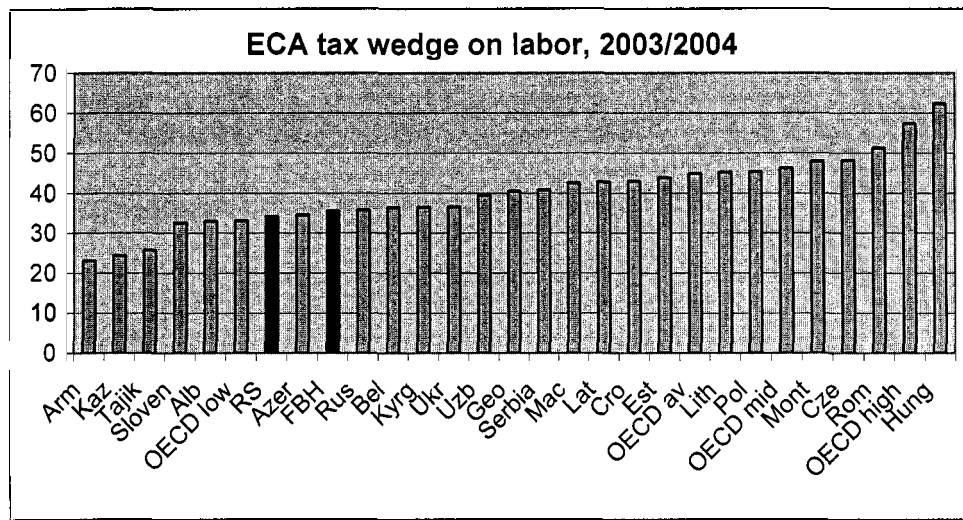
\* Allowances are taxable in the RS and therefore are not reported separately; also, the tax wedge in the RS is the same irrespective of level of wages/allowances/labor costs – so only one case is reported for benchmarking it to the case of the FBH.

\* The table shows labor costs are higher in the FBH than in the RS for a given value of take home “wages and benefits” (compare column 5 to column 1) or, equivalently, that for the same labor costs to employers take home pay is lower in the RS than in the FBH.

- 1) **Bold numbers** indicate the reference points for subsequent calculations in the two Entities.
  - “**Net wage**” is row (1) in the FBH but row (4) in the RS.
  - “**Gross wage**” is row (8) in the FBH but row (10) in the RS.
- 2) The tax rates are: 5% in the *FBH* levied on row (1), and 10% in the *RS* levied on row (4).
- 3) The social security contributions for pensions, health and unemployment (and, for the RS, children benefit) are 43.5% in the *FBH* levied on row (8) and 42% in the *RS* levied on row (4).
- 4) Allowances (such as hot meals and transport) are non-taxable in the FBH. Therefore, the larger the share of allowances, the lower the tax wedge. For example, if other allowances (e.g. leave) are assumed to be equal in value to the value of the hot meal and transport allowances, the tax wedge in column (1) is reduced to 23%.

31. **At around one-third of labor costs, the conventionally defined tax wedge in both FBH and RS does not stand out as excessive among comparator countries.** For example, Figure 1.6 shows the tax wedge in a number of neighboring economies in ECA and also in the OECD. The RS and the FBH occupy the 6<sup>th</sup> and 8<sup>th</sup> lowest positions, but only three countries have substantially lower tax wedge than the two Entities among the 29 listed in the Figure.

Figure 1.6 The RS and FBH tax wedges are at the lower end of those found in ECA and OECD



Sources: OECD, Taxing Wages 2002/03 for OECD and ECA OECD, except Slovenia (based on 2001); Bank staff estimates for others (using 2003 for ECA countries taken from World Bank ECA Labor Market Study, forthcoming, and 2004 for RS and FBH). Tax wedge calculated for non-agricultural AW worker without dependents in ECA and production AW worker without dependents in OECD. OECD groupings exclude ECA OECD: (i) low (less than 40% wedge) includes Australia, Iceland, Ireland, Japan, Korea, Mexico, New Zealand, Portugal, Switzerland, UK and USA; (ii) mid (40-50%) includes Canada, Denmark, Greece, Luxembourg, Norway, Spain and Sweden; (iii) high (51+ %) includes Austria, Belgium, Finland, France, Germany, Italy and Netherlands. Note: tax wedge calculations are based on nominal regulatory provisions

32. **However, such comparisons need to be treated with caution, given comparability of data and various tax exemptions.** In particular, one should bear in mind that tax wedges in ECA countries are high relative to their per capita income levels.<sup>18</sup> Finally, another reason for the low rate of the tax wedge in BH might have to do with the genuinely high labor costs in absolute terms, an observation made earlier with reference to Table 1.8.

33. **Improvements in the area of social insurance should focus on broadening the social insurance contributions and tax base by treating non-wage benefits as part of the worker's total compensation.** The latter can be facilitated by setting minimum wages in a pragmatic way for the current economic conditions and making more effective use of the revenues (which will increase the willingness of workers to participate in social insurance schemes). This will increase worker protection against risks of poor health, old age and unemployment and will reduce perception of social insurance contributions as taxes (see Box 1.2).

34. **At the same time, alternative ways to reduce the payroll burden of taxation should be explored.** For example, BH is in the process of introducing VAT, and excess proceeds, if any, could be used to finance a reduction in the rates levied on social insurance contribution and wage taxes. This would require an analysis on types of social spending with the highest returns and which will increase welfare the most.

<sup>18</sup> World Bank (2005), *Labor Markets in Europe and Central Asia: Towards Creating More and Better Jobs*

**Box 1.2 Social Insurance: A tax or a benefit, and should it be financed by general taxes or payroll deductions?**

High or rising payroll taxes or social insurance contributions are often seen as contributing to low or falling employment (OECD 1994). The assumption behind this belief is that deductions in the forms of taxes or contributions are perceived as increasing the price of labor. An alternative assumption is that social insurance does not raise the overall labor costs but changes the composition of labor costs from wages to benefits. The latter amounts to saying that workers are prepared to accept lower wages because of future social benefits financed today through social insurance contributions or taxation on pay. In short, the effects of funding benefits via the payroll depend on whether workers value the additional benefit enough to accept lower wages (Summers, 1989).

The evidence on these propositions is mixed. Surely when payroll deductions are abnormally high and serve the purpose of reducing general budget deficits rather than funding worker benefits, the labor market will react negatively. In the context of more disciplined and better governed economies, however, the evidence is quite mixed. For example, employer-provided insurance benefits in the United States show little or no effect on employment (Gruber and Krueger 1991; Gruber 1998.). Similarly, employment levels in Germany do not appear to be sensitive to different health insurance contributions (Bauer and Riphahn, 1998.). Even among developing countries, it seems that many of the payroll funded benefits result more in a reduction in workers take home pay than additions to the labor costs of the employer (Heckman and Pages, 2004). In conclusion, while there are clear (and often, many) cases where payroll deductions are set at high levels and are used for purposes other than for social insurance, the perception of social insurance contributions as taxes is not clearly supported by the empirical evidence (Johnson and Musgrove 1997).

In fact, economic analysis is also vague on the issue of funding of social services and in practice many different systems coexist. For example, the percentage of total health expenditure financed by general taxation (instead of payroll deductions for health insurance) is greater than 70% in Sweden, Spain, Denmark and the UK. Conversely, France, Germany and the Netherlands finance their health systems mainly from social health insurance (in excess of 70%) and rely minimally on revenues from taxation (Mossialos and Dixon, 2004: Ch. 1, p. 11).

What is more important, therefore, is for countries to identify their priorities and consider financial sustainable systems that satisfy social criteria (such as adequacy of coverage, cost effectiveness, horizontal equity, progressivity (vertically equitable)) as well as economic ones (such as regional, industrial and macroeconomic effects which are aptly summarized by the terms allocative, technical, distributional and dynamic efficiency).

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# CHAPTER 2: INDUSTRIAL WAGES AND INDIVIDUAL EARNINGS

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## Introduction and Summary

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35. This chapter examines the statistical sources of industrial wages (from administrative sources) and individual earnings (from the LSMS) and undertakes various analyses of the characteristics and determinants of workers' pay.

36. **With respect to the data sources, the findings suggest that the labor market information system in BH is incomplete and, for certain issues, potentially misleading.** In many cases the findings from administrative data contradict those from survey data) For example, the proposition that industrial relations have a significant bearing on actual labor market outcomes (notably with respect to minimum wages, low pay and the distribution of pay) is supported in some cases but negated in others. The findings from the analysis of the LSMS are probably more reliable, although the surveys themselves have some shortcomings as well. Nevertheless, a number of propositions can be put forward.

37. **The analysis supports earlier findings that there are significant differentials across Entities, gender, educational groups and, to a lesser extent, sectors of employment.** It also casts additional light on the importance of institutional factors on wage outcomes in both the RS and the FBH. Where differences between the present and previous analyses emerge, they do not necessarily contradict each other as the current analysis benefits from most recent information that was not previously available (for example, the LSMS data for 2003 and administrative data for 2004). In fact, our analysis suggests that there might have been some significant adjustments in the way the labor market operates during the more recent years, most notably in the FBH. For example, while minimum wages have been found to be quite binding and with ripple effects on the rest of the FBH economy in the past, they may be less so recently. This is compatible with the present finding that institutional factors (such as specific provisions in collective agreements) do not generally have the expected impact on earnings.

38. **Bearing in mind that data on wages and earnings are subject to biases arising from the partial and irregular reporting and that the definitive proof is still to be produced, a number of summary statements can be made.**

**a. There is some evidence of a binding minimum wage in the FBH...:**

- The dispersion of industrial wages has been rather constant in the FBH over time.
- The ranking of industries according to the level of relative earnings is quite comparable between the FBH and the RS, but only for the highest paying industries. For the lower paying industries the rankings between the Entities are rather mixed, which suggests that

there are different forces in operation in the low pay sectors that are subject to different procedures determining effective minimum wages.

- Wage increases in low paying industries in the FBH have been larger than in higher paying industries.

**b. ...but there is also evidence suggesting that minimum wage determination in the FBH may not be fully binding or not as binding as before:**

- Around 20 percent of formal sector employees in the FBH report earnings less than the minimum wage, and the share of formal sector employees who receive less than 50 percent of the average wage is very similar in the two Entities, despite the different levels of minimum wages.
- Although the dispersion of individuals' earnings used to be *relatively* compressed in the FBH, the dispersion in the RS has declined sharply over time and is now comparable to that in the FBH; also, the dispersion of industrial wages is no longer materially different in the two Entities.
- While differences in the distribution of earnings between the formal and the informal sectors in the FBH were initially large (2001), the differences have disappeared by 2003.
- Wage increases in low paying industries in the RS have, in fact, been greater than in the FBH.
- An additional point favoring the FBH is that industrial wage increases have been much lower than in the RS (i.e. ripple effects, if applicable, have not been higher in the FBH – see also Chapter 1 on the relationship between wage increases, inflation and productivity).

**c. Institutional factors have little or no statistically detectable effect on earnings:**

- The institutional variables included in the analysis (such as size of firm, industrial sector, ownership and so on) generally failed to produce evidence that they have significant effects on earnings.
- The explanatory power of the regressions used in the analysis declined over time, suggesting that systematic factors are becoming less relevant.
- The effect of education on earnings in both Entities is rather small and out of line with what the relevant “coefficients” in collective agreements would have implied.
- Similarly, the effect of tenure or seniority on earnings cannot be statistically supported for either Entity.
- Some of the most unionized sectors (such as mining and manufacturing) are the lowest paying in both the FBH and the RS – although this may also reflect the stress these sectors (more generally, the public sector) have been under in more recent periods due to the need for restructuring.

**d. Still, workers' earnings are characterized by some undesirable conditions such as:**

- Many workers are paid less than their usual wages; and although the share of those receiving wage arrears has declined, it might still affect one-in-five workers.
- Although some or many waitlisted workers might be employed in the informal sector, they do so at a significant reduction in their earnings after controlling for other factors.
- Together with the findings from the LSMS reported below, the analysis of industrial wages suggests a good possibility that the two Entity labor markets are not that seamless.

39. **Analysis of the available data suggests that the wage determination process is not subject to easily identified systematic forces, administrative or competitive.** This can be the result of the ongoing transition and incomplete economic adjustment and, probably, an indication of relative flexibility in the labor market at large. For example, labor hoarding on the labor demand side is suspected to still be sizeable, and labor supply exceeds labor demand; under such conditions, both workers and employers might want to collude for the sake of either preserving employment or avoiding payroll deductions. Accordingly, an attempt to apply a rigid wage determination system might produce opportunistic effects in the sense that it affects only specific sectors under specific conditions – most likely in the public sector. Still, almost half of workers in the public sector receive pay that is different from their usual pay, and many (perhaps 100,000 or more) are “fictitious” workers. In brief, the current system does not have its intended effects.

40. **This suggests the need for a leaner set of labor regulations which are enforceable.** One obvious conclusion from this analysis is that, rather than having a rigid industrial relations system “in the books” that can potentially deter investors while creating all sorts of uncertainties among employers and inequities among workers, a better approach would be to redesign the system in a way that will have fewer specifics (e.g. wage increments for different levels of education) but, instead, will include some more general and transparent principles to which everyone would be expected to adhere to. For example, more factors should be taken into consideration in setting the minimum wage than just the average wage (which has, until recently, been the case in the FBH), including differentiating between youth and adult workers (which is not the case in either Entity). In addition, the system of “coefficients” (whose impact is undetectable in the general labor market even though they might have a restrictive effect in certain sectors and specific companies) is not appropriate in a dynamic market where multi-tasking and informal and lifelong learning are increasingly becoming more common. Finally, the separation of public sector wage determination from that of the private sector is common in many countries and desirable on economic grounds - productive sectors (in the sense of selling services or commodities) are subject to different forces than the public sector whose responsibility is the provision of public goods. The application of the same rules, regulations and collective agreements across the board might lead to significant inefficiencies when there are many different types of company ownership (such as public, mixed, cooperative and private – and the latter can be formal or informal).

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## A. Statistical Sources

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41. **There are two main sources of data on earnings in BH:** administrative (“grouped”) data on average wages by industry, and survey data reporting individual earnings of workers.

### *Administrative Data*

42. **Administrative data are collected in both Entities by their respective Statistical Offices and are based on returns completed by registered companies.** The companies report the total wage bill and also the number of workers falling into different earnings brackets. Accordingly, the average wage for the company (subsequently, for a sector and eventually, for the Entity) is derived as a simple average of the reported information by dividing the total wage bill by total employment. There is no systematic analysis of the distribution of earnings, which is, in any case, generally deemed to be biased downwards due to underreporting of earnings

mainly by private employers (for example, in order to avoid paying the full value of social security contributions). There is no information on hours of work.<sup>19</sup>

43. **In addition to the underreporting of earnings by private employers, another source of bias arises from the fact that very few companies report the aforementioned information to the Statistical Offices, and most of those that do are in the broadly defined public sector.** Taking the example of the RS, there were more than 16,000 registered companies at the end of 2004, of which only about 1,800 returned their forms. Still, this disappointing overall response rate (11 percent) is not random and is, therefore, not representative of what happens in the economy - more than 1,400 returns came from government or mixed (i.e. public and private) companies whose response rate was 86 percent and 66 percent, respectively. These two sectors account for 80 percent of all responding companies. The private sector's response rate was a mere 10 percent (Table 2.1). Thus, the administrative data on earnings are heavily biased towards the public sector.<sup>20</sup>

**Table 2.1 Company Registry and Response Base for the Calculation of Wages, RS, 2004 December**

Code	Type	No. of Registered Companies 1	No. of Respondents 2	% Respondents 2/1	% Distribution of Column 2
0	NGO/International	3132	150	5%	8%
2	Private	11152	191	2%	10%
3	Cooperative	287	48	17%	3%
4	Mixed	914	783	86%	43%
5	Public	1006	664	66%	36%
	Total	16491	1836	11%	100%

Source: RS Statistical Office

### *Survey data*

44. **The second data source for labor market analysis is the household-level data from the Living Standards Measurement Survey (LSMS).** An assessment of the LSMS can be found in the later part of this chapter and its methodology and relevant variables are explained in the Annex of this report. Here, the focus is to compare the LSMS earnings data with those derived from administrative data. Table 2.2 indicates earnings in 2003, as reported in the LSMS and by Statistical Offices of each Entity.

**Table 2.2 Comparison of Earnings (KM/month) Between Administrative and Survey Data\*, 2003**

Monthly wages	FBH	RS
Administrative Data/Statistical Offices	524	379
LSMS formal (public and private)	536	343
-- public	491	304
-- private formal	608	429
LSMS – All (public and private, formal and informal)	531	330
LSMS – All (incl. those reporting zero earnings)*	477	231

\* LSMS earnings are based on employees of all ages 15+ reporting positive (usual) earnings, except the last row, which refers to all workers.

Sources: LSMS own calculations; Administrative data: Appendix Table A1.3.

<sup>19</sup> However, the Statistical Institutes have also been compiling data on paid employment, whose magnitudes are substantially lower than officially reported employment.

<sup>20</sup> Another problem with the administrative data is that the company registry is not updated – thus many of the listed 11,000 private companies may have ceased operations, being dormant or closed down.

45. **There are substantial differences between survey and administrative wage data in RS; however, this difference is less pronounced in FBH.** The average formal earnings, as calculated from the LSMS, are approximately 10 percent below the average earnings reported by administrative data in the RS (KM343 vs. KM 379); however, in the case of the FBH, the corresponding difference is very small (KM536 vs. KM 524). Although these differences are rather small and reassuring at face value, this is probably coincidental rather than by design since administrative data are heavily biased towards the public sector. Comparing the administrative-based average pay to the LSMS average pay only for the public sector increases the difference to 20 percent for the RS and 10 percent for the FBH (KM304 vs. KM379 for the former, and KM491 vs. KM525 for the latter).<sup>21</sup>

46. **The administrative data and the LSMS relate to different parts of the labor market and probably, as is also argued below, none is very reliable for factual analysis of the labor market and subsequent design of relevant policies.** The differences between results of the two data sets are probably more than a simple comparison of the averages might indicate. Another comparison consists of estimating the correlations between industrial earnings as reported by the Statistical Offices and as calculated by the LSMS but for different categories of workers. As Table 2.3 indicates, the LSMS reported average industrial wages for workers in the public sector correlate rather highly (0.70 and above) with the averages based on administrative data. The correlation drops significantly (by almost half) in the case of private sector earnings and becomes practically zero in the case of informal sector earnings.

**Table 2.3 Correlations Between Industrial Average Earnings  
Calculated from Administrative Sources and the LSMS, 2003**

Sector	FBH	RS
Public	0.77	0.69
Private	0.43	0.26
Informal	0.05	-0.03

Source: Calculated from Appendix Table A2.1

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## B. Inter-Industry Pay Differentials

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### *The Ranking of Industries in the Two Entities*

47. If the two Entity labor markets were relatively integrated, one would expect to see inter-industry earnings differentials to be closely related. There are many elaborate tests that can help answer this hypothesis, and some of the econometric work presented in this report and based on individual earnings attests to significant differences between the labor markets of the two

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<sup>21</sup> One explanation for the underestimation of earnings by the LSMS is that respondents may be less accurate when they report their earnings. Also, workers may have a tendency to report net (take home), rather than gross, earnings. Finally, it must be almost certain that the companies that supply information on earnings are current with respect to their financial obligations to their workers and the payment of social insurance contributions. Conversely, while the non-response rate may, in part, be due to some genuine negligence by the firms to fill in the appropriate forms or closure of operations, it should mainly be related to unfulfilled financial obligations - companies may be unwilling to complete the questionnaire in an attempt to reduce payments (to workers or taxes and social insurance contributions) at least in the short run.



Entities.<sup>22</sup> However, the grouped data from administrative sources (that is, average earnings by industry as reported by the Statistical Offices) can be used to quickly examine whether there is some congruence between industries in the two Entities when ranked according to relative earnings – from highest to lowest, in comparison to each Entity’s average wages.

48. **The results suggest strong uniformity for the higher paying industries but quite a diverse situation for the lowest paying industries.** The relevant hypothesis here is whether the ranking of industries by level of earnings is comparable in the two Entities, and whether the relative position of earnings are strongly or weakly correlated. As Table 2.4 indicates, the four highest paying industries in the FBH are also the highest paying ones in the RS and have the same ranking order. These four industries are financial intermediation, public administration, transport, storage and communication, and electricity, gas and water. *The correlation between the relative position of earnings in these four industries in each Entity comes to a high 0.94.*

**Table 2.4 Industries Ranked by Their Wages Relatively to Average Wage in Each Entity**

FBH			RS		
Financial intermediation	191%	183%	Financial intermediation		
Public administration etc	128%	152%	Public administration etc		
Transport, storage and communication	126%	134%	Transport, storage and communication		
Electricity, gas and water supply	125%	133%	Electricity, gas and water supply		
Health and social welfare	109%	119%	Real estate, renting and business activities		
Other social and personal services	99%	109%	Health and social welfare		
Real estate, renting and business activities	98%	91%	Education		
Agriculture, hunting and forestry	95%	87%	Agriculture, hunting and forestry		
Education	93%	86%	Other social and personal services		
Mining	82%	75%	Construction		
Manufacturing	75%	74%	Wholesale, retail; certain repair		
Wholesale, retail; certain repair	73%	72%	Fishing		
Catering	73%	67%	Manufacturing		
Fishing	67%	63%	Mining		
Construction	66%	56%	Catering		

Source: Appendix Table A1.3

49. **While there appears to be common forces operating at the high paying industries in both Entities, the similarities are reduced in the middle-paying industries.** The group comprised of the next five highest paying industries is also composed of common sectors in both Entities - Health and social welfare; Other social and personal services; Real estate, renting and business activities; Agriculture, hunting and forestry; and Education. These five industries rank differently within this middle-range of earnings, and the correlation drops significantly to 0.45.

50. **There is a large discrepancy among the lowest-paying industries.** The final group consists of the remaining six low-paying industries - Mining; Manufacturing; Wholesale and retail trade; Catering; Fishing; and Construction. Although this is also a common group in terms of industrial composition, the correlation of relative earnings within that group is -0.53. This discrepancy at the lower end is associated with a lower dispersion of earnings in the FBH compared to the RS: the lowest relative earnings in the FBH are 66 percent (for construction

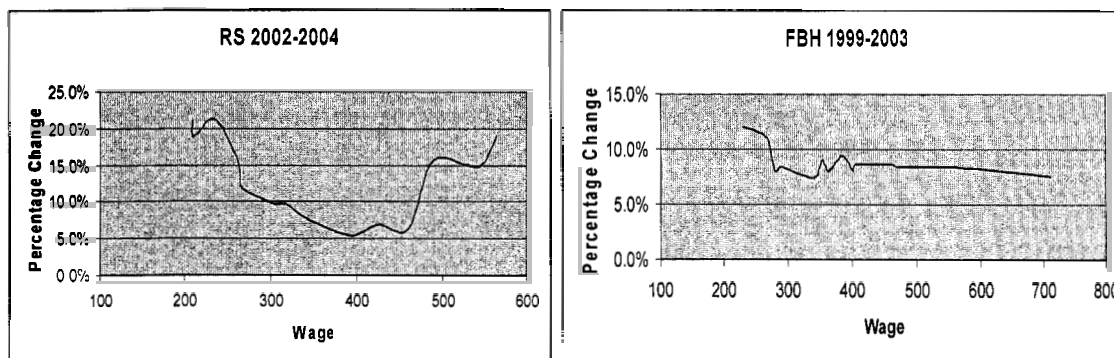
<sup>22</sup> The F-tests imply significant structural differences between the two labor markets and this is why the empirical investigation is based on separate regressions for the RS and the FBH and also for women and men.

sector) of the average wage while the lowest relative earnings in the RS are 56 percent (for Catering) and 63 percent (for Mining). This suggests that minimum wages in the FBH provide an effective floor for wages.

51. **The spread of industrial wages is also wider in the RS than in the FBH.** Excluding the financial sector, the range of relative wages spreads from 56 percent to 152 percent in the RS, but only from 66 percent to 128 percent in the FBH. This is consistent with the hypothesis that setting the minimum wage in the FBH in relation to the average wage has a compressing effect on the dispersion of earnings in that Entity.<sup>23</sup>

52. **In recent years, earnings in the lowest paying industries experienced a greater proportionate increase than in the high-paying sectors in both Entities.** Another look at changes in industrial earnings over time is provided in Figure 2.1.<sup>24</sup> The figure shows percentage changes in industrial earnings ranked from the lowest to the highest. It shows that in recent years earnings in the lowest paying industries experienced a greater proportionate increase than in the higher paying ones, and this is true for both Entities. However, note that the spread is quite narrow in the FBH. In the RS, the highest paying industries also experienced significant increases in earnings almost comparable to the low paying industries.

**Figure 2.1 Percentage Increases in Average Industry Wages**  
(Moving average of industries ranked from lowest to highest pay ones)



Source: Own calculations, based on Statistical Institute Wage data

### *The Dispersion of Industrial Wages and Individuals' Earnings*

53. **Wage dispersion analysis suggests that the wage setting mechanism in the FBH might be more rigid than in the RS.** To explore the dispersion of earnings further, we examine the industrial wages as reported by administrative data, and the individual earnings as reported by

<sup>23</sup> The industries listed in the last few rows of Table 2.4 contain some in which most workers are covered by collective agreements, as well some which are least covered. For example, manufacturing accounts for one quarter of all covered workers in the FBH and one in six workers in the RS. However, earnings in manufacturing are around 66-75 percent of the respective average industrial earnings in each Entity. Together with Mining (whose coverage rate is 98% in the FBH), Manufacturing, Construction and Agriculture account for half of all covered workers in each Entity (Appendix Table A2.1). However, high union coverage is also common in the highest paying industries. For the FBH where data exist on both employment and coverage of collective agreements, more than 90 percent of workers in the financial sector are covered. The rates are similarly high (more than 80 percent) in the other high paying industries such as Utilities, Transport and Public administration.

<sup>24</sup> The lines represent three-industry moving averages ranked from the lowest to the highest.

the LSMS (see Table 2.5). Using the coefficient of variation as the relevant measure of dispersion, the dispersion of industrial wages in the FBH was slightly above that in the RS in 2001. While the dispersion increased in both Entities until 2004, the increase was greater for the RS. This suggests that the wage setting mechanism in the FBH might be rigid in the sense that it does not allow for changes in relative wages to take place as freely as in the RS.

**Table 2.5 Coefficient of Variation of Earnings**

In percent	2001	2002	2004
Average Wages in 14 Industries			
FBH	31.9	36.9	34.0*
RS	31.7	35.0	39.2
Individual Earnings (LSMS)			
FBH	77.4	72.5	75.0
RS	103.1	86.8	75.1

\* Latest figure for the FBH is for 2003

Note: LSMS figures are for all employees reporting positive earnings.

Sources: Industrial figures calculated from Appendix Table A2.1;

54. **The more compressed distribution of pay in the FBH compared to the RS is also confirmed by the LSMS:** the coefficient of variation was 77 percent for the FBH in 2001 compared to more than 100 percent in the RS. By 2003, the value of the coefficient of variation in the FBH declined (contrary to what the administrative data suggested), but the change was rather small. So, the inference about the rigidity of wage determination in the FBH still applies. However, the LSMS data are quite contradictory to the administrative data in the case of the RS: the coefficient of variation in the RS declined by a massive (if correctly measured) 30 percent and was equal to that in the FBH by 2004.

#### *The Effect of the Minimum Wage*

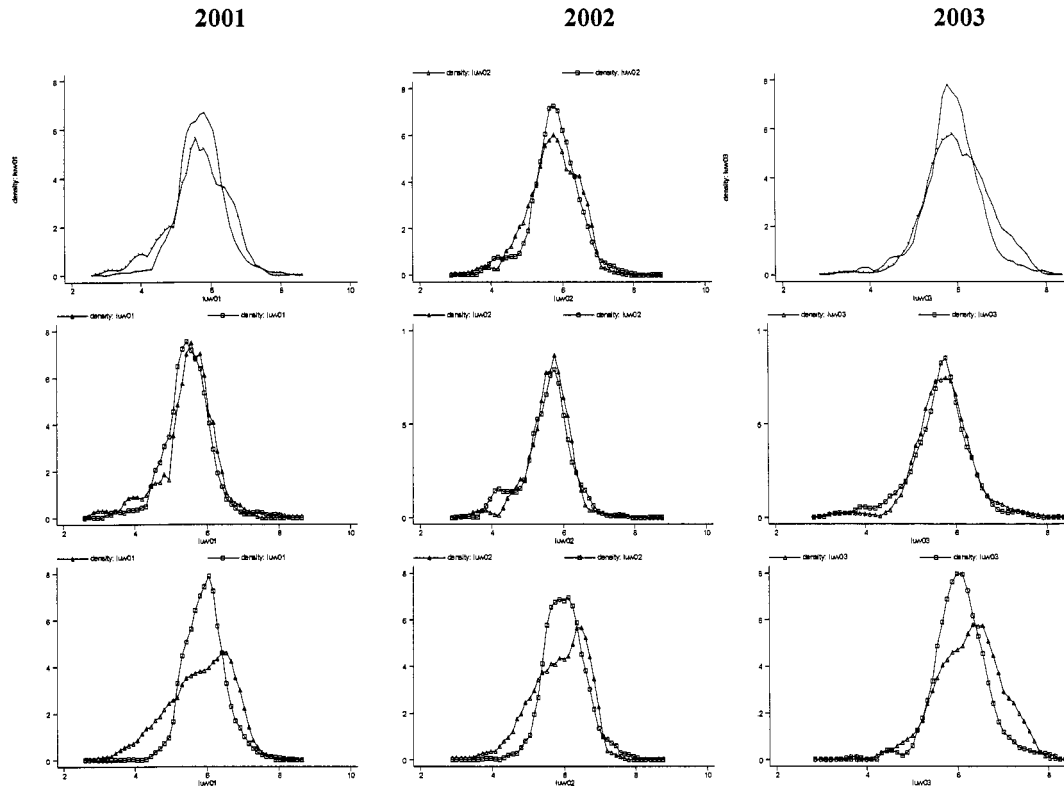
55. Another way to examine the issue whether the minimum wage setting mechanism has an effect in the FBH is through graphical analysis, using Kernel estimates of the real wage distributions in the formal and informal sectors. Figures 2.2a and 2.2b present the relevant information for all workers and also for the more well-defined group of employees only. The differences between formal and informal sector wages are shown in the higher density in the left tail of the informal sector wage distribution, and the higher mean for the formal sector. The top panel refers to BH as a whole, while the middle panel presents RS results and the bottom panel FBH results. The first column on the left refers to 2001 and the last column on the right to 2003.

56. **At the country-wide (BH) level, there are practically no differences between wage distributions in the formal and informal sectors.** This masks, however, differences between the two Entities. More specifically, separating the distributions across Entities reveals that most of the differences between formal and informal sectors are attributed to the FBH (third row in Figure 2.2a).

57. **While the formal and informal sector wage distributions in RS are virtually identical, the two FBH distributions are very different, suggesting that wage inequality is much higher in the FBH informal sector.** As Figure 2.2a indicates, the mode for the informal sector in the FBH occurs at a considerably lower wage but with its upper tail coinciding with the formal distribution (in real wages). Consequently, wage inequality is much larger in the informal sector in the FBH.

58. The above finding for the FBH is consistent with a binding minimum wage that is enforced in the formal, but not in the informal, sector. The RS result, meanwhile, is consistent with the minimum wage set at a very low level. This finding suggests that the minimum wage might well have an employment-reducing effect in the formal sector, and that some workers might be forced to look for jobs in the informal sector. However, the differences on the left tail of the FBH distribution practically collapsed by 2003.

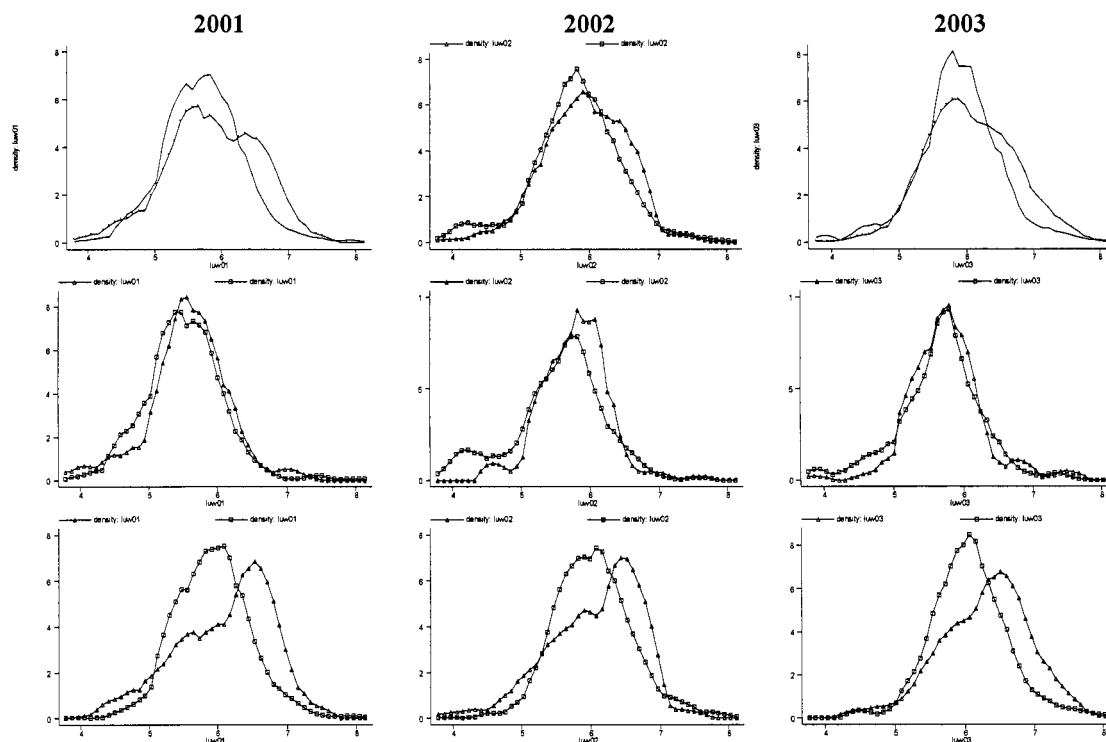
**Figure 2.2a Kernel Estimates of the log real wage distributions in the formal and informal sectors in BH (top panel), RS (middle panel) and FBH (lower panel): all workers (2001 to 2003)**



Source: Own calculations based on LSMS

59. However, the differences between formal and informal sector wage distributions in the FBH at the lower end disappear in 2003, suggesting that the minimum wage has become less binding. While the previous discussion relates to all workers, a more precise way to check the possible effect of minimum wages on the lower paid is to restrict the sample to employees only. This is done in Figure 2.2b where the lack of visible differences in the RS is reconfirmed. For the FBH, differences at the lower end of the distributions between the formal sector and informal sector have become smaller over time and disappeared in 2003.

**Figure 2.2b Kernel Estimates of the log real wage distributions in the formal and informal sectors in BH (top panel), RS (middle panel) and FBH (lower panel): employees only earning between KM40 and KM 4000 (2001 to 2003)**



Source: Own calculations based on LSMS

### *Conclusions*

60. Prior to examining individual earnings, it would be useful to attempt to summarize the above findings, given their diversity.

61. **Administrative data are subject to biases, arising from the partial and irregular reporting of earnings, especially from companies in the private sector.** Thus, although the examination of administrative data has produced some results, these results cannot be construed as definitive proof.

62. **The rankings of industries according to the level of relative earnings are comparable in the two Entities, but only for the highest paying industries.** For the lower paying industries, the ranking is rather mixed, and the correlation of their relative earnings is high but negative. Although this finding is far from conclusive, it suggests that there are different forces operating in the two labor markets. Possibly, the high minimum wage in the FBH is partly responsible for the difference among low paying industries. The wage dispersion is relatively compressed and has been rather constant in the FBH over time. This is another indication that rigid wage setting forces may be in operation in the FBH.

63. **However, the dispersion of earnings in the RS, having declined rapidly over time, has become as compressed as in the FBH in 2003.** Additionally, wages in low paying industries seem to have been increasing faster in the RS than in the FBH. This runs contrary to

what one would expect, given that the minimum wage in the RS is low and generally believed to be non-binding.

64. **The wage distributions between the formal and informal sectors in the FBH were substantially different in 2001 and 2002, but less so in 2003.** While the kernel density functions have indicated significant initial differences in the wage distributions between the formal and informal sectors in the FBH, the differences have disappeared by 2003. It is not very clear whether this is because of the quality of data or because the system is: (a) evaded, or (b) evolving and cannot therefore produce systematic results.

65. **There are substantial differences between the RS and FBH labor markets.** Together with the findings from the LSMS reported below, the analysis of industrial wages suggests that the two labor markets are showing different characteristics and dynamics and are not seamless.

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## C. Individual Earnings

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66. This section examines three additional aspects of pay: first, the share of workers whose pay is different from what is usually expected - for example, because of non-payment, or the payment of arrears; second, the share of workers who receive less than the minimum wage and less than 50 percent of the average wage – the low paid; and third, the determinants of individual earnings through the use of earnings functions.

### *Differences Between Usual and Actual Pay*

67. **The information in the LSMS provides an opportunity to examine a critical feature of the labor market in Bosnia and Herzegovina – the underpayment of workers.** In theory there are three kinds of workers: (i) those who receive what their contracts provide for, and this can be labeled “usual pay”; (ii) those whose “actual” pay may be different than their usual pay during a particular pay period - this can be because of arrears or because employers cannot meet their obligations in the current period, and it can be positive or negative<sup>25</sup>; and (iii) those who are employed and receive no pay (Some non-payment can be justified, for example, in the case of family workers. Other non-payment can be explained by an employer being currently unable to pay, but the expectation is that the employment relationship will be resumed in the near future, though not necessarily with the exact current terms. This category of workers is known as “waitlisted” or “fictitious” workers).

68. **The share of workers experiencing wage arrears has been declining in recent years, while workers who receive actual pay that is different from usual pay has been rather constant over time.** Table 2.6 shows the share of workers receiving arrears. Although significant in size, an encouraging development is that these workers constitute a declining share over time. On the other hand, the share of workers who receive actual pay that is different from usual pay has been rather constant over time.

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<sup>25</sup> In BH the difference between “actual” and “usual” pay usually signifies underpayment and payment arrears.

**Table 2.6 Share of Workers Whose Pay is Different than Usual Pay**

In percent	2001	2002	2003
Workers receiving arrears			
RS	42	33	Na
FBH	19	16	Na
Workers receiving actual pay different from usual pay			
RS	19	22	23
FBH	26	27	25

Source: For arrears: CEM 2004; for differences in pay LSMS.

Notes: Arrears are defined as a delay in salary payment of 2 months or more

69. **The share of workers with zero earnings is substantial in both Entities, particularly in RS.** Table 2.7 shows the sample size of workers for each Entity in the LSMS 2003 and the share of those who did not report positive earnings in the month prior to the survey. The overall share is rather significant in the FBH (10%), and three times higher in the RS (30%).<sup>26</sup> This seems to be driven by the much larger informal sector in the RS, in which family workers and informal/casual employment and pay are more common.

**Table 2.7 Number of Workers in the LSMS 2003 and Share of Workers Reporting Zero Earnings**

	FBH	percent with 0 wages	RS	percent with 0 wages
Total	1373	10.2	1331	30.1
Public	564	2.0	546	15.0
Private	349	0.0	219	1.8
Informal	460	28.0	566	55.7

Note: excludes workers in international organizations

Source: Own calculations based on LSMS 2003

70. **The private sector seems to be the most compliant with respect to the regular and full payment of wages.** As Table 2.7 shows, practically none in the FBH and very few private sector workers in the RS reported zero wages. By comparison, there were a few public sector workers reporting zero earnings in the FBH, but as much as 15 percent in the RS.

**Table 2.8 Index of shares of workers paid and of workers paid different wages, 2003**

	FBH			RS		
	Index	% paid	% paid wages diff. than usual wages	Index	% paid	% paid wages diff. than usual wages
public	100	98	41	100	85	38
private	100	100	77	100	98	79
informal	100	72	50	100	44	29
all	100	90	67	100	70	54

Source: Own calculations based on LSMS

71. **However, the share of workers receiving actual pay different from usual pay is quite high in both Entities.** To the extent that the LSMS accurately reports the situation for the employed, the small number of workers reporting zero earnings (outside the informal sector and the public sector in the RS) is encouraging. However, as Table 2.8 shows, the share of workers receiving actual pay different from usual pay is quite high: around two thirds in the FBH, and more than one half of RS workers. It is not clear how reliable these estimates are. For example, the LSMS reports that only approximately 3 percent of the employed individuals declared

<sup>26</sup> This discrepancy between the size of the informal sector in the two Entities reinforces the view that the two labor markets are different.

themselves as “waitlisted”. Compared to the common belief that the number of waitlisted workers might still be greater than 100,000, this discrepancy does not provide much comfort as to the reliability of the LSMS. However, while a large number of waitlisted workers might officially be on the books, the majority of such workers are in some form of employment and, when asked the relevant survey question, it is possible they preferred to respond as being employed rather than being waitlisted.

### *The Low Paid*

72. Assessing the share of workers whose earnings are below the minimum wage or significantly below the average wage in their respective Entities gives crucial insights into the role of minimum wages. The LSMS allows such examination, and the results are summarized in Table 2.9. The analysis of earnings below 50 percent of the average wage are noteworthy, considering the minimum wage in the FBH was set at 55 percent of the average wage, while it is substantially lower in RS. Note, however, that there are considerable variations and possibly contradictions among the figures presented in the said Table, supporting the reservations expressed in the previous chapter on the quality of data collection.

**Table 2.9 FBH and RS have a similar share of formal sector employees reporting positive earnings below the half the average wage**

	% earning below formal MW			% earning below 50 percent of AW		
	men	women	All	men	women	All
<b>FBH</b>						
2001	15.6	29.3	20.2	11.5	23.9	15.6
2002	16.4	29.5	20.7	7.7	15.3	10.2
2003	15.1	23.9	18.1	7.0	13.9	9.4
<b>RS</b>						
2001	2.0	6.7	3.7	8.1	16.5	11.0
2002	10.9	5.2	8.9	13.9	10.7	12.8
2003	4.6	2.4	3.8	8.0	6.5	7.5

Source: Own calculations based on LSMS; Note: (a) Earnings are for workers aged 15 and older; (2) Averages are calculated from the LSMS and are based on usual earnings.

73. **The share of paid workers whose usual earnings were below the minimum wage in the FBH at 20 percent is high.** While we see a slight decrease in the FBH, there are signs of dynamics for male workers in the RS between the years. The former might be an indication of more effective enforcement of minimum wages in the FBH. However, this might also be due to compositional effects if, for example, the workers earning below the minimum wage have switched to informal employment – another undesirable feature of high minimum wages. Given employment restructuring and the decline in formal sector employment, the workers who retained their employment represent the more productive ones, and thus might be receiving higher wages than those whose employment was terminated.

74. **The share of workers reporting earnings below 50 percent of the average wage are roughly equal in both Entities, despite the different minimum wage levels.** When the critical level of wage is calculated not from administrative data but from the LSMS data (for example, as 50 percent of the average reported earnings), it is evident that the share of workers earning below that critical level has declined in both Entities, and significantly so in the FBH. The share of workers earning below 50 percent of the average wage is now similar in both Entities: one in ten



workers. However, most importantly, the findings reveal that the minimum wage in the FBH is not fully binding, with a sizeable share of workers reporting earnings below the minimum wage.

### ***Earnings Functions***

75. The determinants of earnings based on the results of earlier LSMS have been extensively analyzed before.<sup>27</sup> This section extends previous analyses to more recent years and offers additional insights. Particular attention is paid to the effects of conventional human capital variables that are more or less typically expected to play a role in a labor market, regardless of other considerations. These human capital variables include the worker's education and personal characteristics relative to his productivity (such as age, as associated with experience), as well as the worker's extent of effort (for example, hours of work and moonlighting).

76. Additional effects on earnings might also arise because of gender differences or location (for example, different conditions existing between the two Entities) and, more interesting in the present context, because of the economic and industrial relations environments in which the labor market operates. These effects come with additional variables, such as those relating to tenure with current employers (seniority allowance might have an effect on earnings), or those relating to type or ownership of the enterprise (public enterprises are potentially more constrained by various collective agreements than private ones). Company size, unionization rates and enforcement is expected to increase with the visibility of an enterprise. Another important factor for consideration is the sector of activity, since different industries are subjected to different competitive pressures or prospects – for example, utilities (gas, electricity and water) and the financial sector have the higher earnings compared to certain services sectors (such as retail and wholesale trade, catering, construction and so on). For comparability and summary purposes, earlier regressions that covered both Entities, both genders, and all sectors are first replicated. Then, separate regressions are run for each Entity and gender since the determinants of earnings for these subcomponents are drastically diverse and do not call for a pooled regression.<sup>28</sup> Also, regressions separating the formal sector from the informal sector are done to obtain additional observations (pooling the two sectors together is not recommended).<sup>29</sup> The substantial differences in the earnings functions between the Entities reinforce the conclusion reached earlier that the two labor markets are relatively diverse.

### ***Aggregate (Country-wide) Analysis***

77. Despite the econometric reservations about pooling different groups and locations together, Table 2.10 provides a summary basis for examining the determinants of individual earnings across BH. The results conclusively show that there are:

- ***gender differences in earnings***, favoring men by 15-20 percent;
- ***higher wage level differences in the FBH*** by 30-40 percent;
- ***differences that favor the more educated*** (for example, university graduates may be paid almost 60-80 percent more than primary schooled graduates);
- significant ***gains from additional hours of work***; and

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<sup>27</sup> See World Bank 2002 and World Bank 2005.

<sup>28</sup> Running separate regressions was justified on the basis of stability (F) tests.

<sup>29</sup> Separate regressions for the formal and the informal sectors are reported in Appendix Table A2.2a and A2.2b.

- *premia for workers in the private sector*, although rather small.<sup>30</sup>

78. The results are less clear-cut with respect to:

- *the informal sector*, where earnings do not appear to be much different from earnings in other sectors, after controlling for other worker and labor market characteristics;
- *firm size*, where one might have expected that earnings increase consistently as company size increases; however, this effect is variable and at times insignificant;<sup>31</sup>
- *tenure/seniority*<sup>32</sup> – given the seniority allowance in collective agreements;
- *the effect of vocational education* (especially since it switches signs between different specifications);
- *age of the worker* (although this is typically one of the most reliable predictors of earnings).

**Table 2.10 Regression results for the two Entities combined, dependent Variable Log (monthly earnings)**

	World Bank CEM 2004		New Results		
	2001	2002	2001	2002	2003
Entity differential	0.40	0.39	0.31	0.31	0.34
Gender differential	0.22	0.17	0.12	0.12	0.14
Informal	insignificant	insignificant	insignificant	insignificant	insignificant
Private/Public	0.18	0.10	0.27	0.16	0.16
Firm size	Variable	variable	variable	variable	insignificant
Age (informal sector)	2/5	insignificant	1/3	1/3	insignificant
Age (formal sector)	2/5	insignificant	1/3	insignificant	insignificant
Tenure	2/6 (wrong sign)	2/6 wrong sign)	4/6 (wrong sign)	1/6 (wrong sign)	1/6 (wrong sign)
Education: primary	insignificant	0.16	-0.15	-0.19	-0.10
Education: vocational	0.10	0.15	-0.08	-0.04	-0.02
Education: secondary	0.23	0.37	0.03	0.08	0.11
Education: college	0.38	0.53	0.26	0.27	0.32
Education: university	0.72	0.90	0.54	0.59	0.65
Hours			0.56	0.38	0.45
N			1271	1233	1205
Adjusted R-2	0.31	0.29	0.34	0.30	0.28

Notes:

- 1) Ratios (e.g. 2/5 for age in the informal sector) refer to the ratio of statistically significant coefficients to statistically insignificant coefficients in the same group of dummies;
- 2) Wrong sing indicates that the coefficient is significant but has the opposite than expected sign (e.g. earnings decline with tenure contrary to what one would expect given the seniority allowance);
- 3) The entity differential favors the FBH;
- 4) The gender differential favors males;

<sup>30</sup> In general, workers in the state owned enterprises (SOEs) earn around 20 percent less than workers in the public administration, health and education while workers in the private sector are estimated to earn about 10% more than government workers.

<sup>31</sup> This is probably due to the operations of or the creation of a new private sector that is reported to be paying higher wages than the prevailing ones.

<sup>32</sup> In fact, the coefficient on tenure has the wrong sign in a number of specifications. In any case, according to current provisions, when the seniority premium increases at 0.5% to 0.6 % a year, it reaches 20% only after 36 to 30 years.

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- 5) Differences in the two specifications include: (a) adding hours as a regressor since earnings relate to monthly pay; (b) omitting workers in international organizations since they are not subject to national market forces. The last three columns are based on employees reporting positive monthly earnings between KM40 and KM4000.

Source: World Bank (2004) and own calculations based on the LSMS 2001, 2002 and 2003.

79. **The unexpected insignificance of many variables suggests that wages may in practice be set in a much more flexible way than that predicted by the industrial relations framework.** The insignificance of these variables was perhaps expected in only one case, that of the informal sector: this is a residual category that may include from low paid casual workers to self-employed professionals. However, the absence of effects from the other variables is rather unexpected in the presumed inflexible industrial relations framework of BH where wage setting is *prima facie* mechanical and operates in specific ways (for example prescribing seniority increases) in identifiable segments of the labor market (such as the bigger companies or the public sector).<sup>33</sup>

80. **While higher levels of education fetch higher earnings, the difference is not that much, if adjusted for the additional years of schooling required to reach one level of education relative to another.** Understanding the effect of education in BH is particularly important because of the insignificance of the institutional variables.<sup>34</sup> Previous analyses have claimed that the returns to education in BH are large and statistically significant. The results reported in Tables 2.10, 2.11a and 2.11b confirm the significance of the education variable (either as a continuous variable, or as dummies reflecting level of education, such as primary education, secondary education and so on). While we also confirm that higher levels of education fetch higher earnings, the difference is not that much, if adjusted for the additional years of schooling required to reach one level of education relative to another. For example, in 2001, the earnings of workers with high school diploma were 23 percent higher than for workers with primary education, 37 percent higher for those with 2 years college education, and 72 percent higher for university graduates. However, post-secondary graduates have 8 and 10 additional years of education (compare to primary school graduates) depending on whether they have completed a two-year college degree or a four-year university degree.

81. **Taking into account the additional years of schooling required to achieve a higher level of education reduces the returns to education significantly.** When this is accounted for, the returns for education become 3.8 percent for high school graduates, 4.6 percent for two-year college graduates and around 7 percent for university graduates. An interesting feature is that the rate of return to education increases with level of education.<sup>35</sup> However, these returns are generally lower than those one would expect (from the international literature) in a market economy. The relatively low returns to education in BH suggest that the “education coefficients” in collective agreements may not be that binding after all. This observation accords at face value the absence of noticeable effects from the institutional variables included in the regression.

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<sup>33</sup> Some of the weak relationships can be traced to multicollinearity which is addressed later in this chapter with some changes in the results.

<sup>34</sup> The industrial relations system can be non-binding either because it is (a) well designed in theory but evaded in practice by market forces or (b) evolving and cannot therefore clear-cut effects in one direction or another.

<sup>35</sup> Recall also that the unemployment rate among university graduates is the lowest of all educational categories of workers.

### *Entity and Gender-Based Analysis*

82. Given the substantial differences in the econometric results for the Entities and for male and female workers, the earnings functions were run separately for each of the four resulting groups (Tables 2.11a and 2.11b), while additional regressions are listed separately for each Entity, sector (formal/informal) and gender (Appendix Tables A2.2a and A2.2b). To avoid statistical noise, the sample is confined only to employees who reported earnings between 10% and 10 times more than the average wage. It is also restricted to workers between the age of 25 and 55 who are a more uniform group than the youth or the elderly. The results are more refined than those reported earlier when all groups were pooled together, and more consistent in many respects. For example:

- *hours and education are consistently significant* and their effect is not affected much by the inclusion of other variables;
- the *effects of education are rather small and similar in the two Entities*: the rate of return to education is around 4-5 percent for men and 7-8 percent for women;
- *vocational education is associated with a negative effect on earnings* of around 20-25 percent (with the exception of women workers in the RS), and this finding can be useful in future educational planning;
- *waitlisted workers have generally lower earnings* (by 50-60 percent) - this indicates that at least some waitlisted workers find alternative or temporary employment, though such employment might be less rewarding and not commensurate with their qualifications, after controlling for other measurable factors;
- the effect of *working in the informal sector is generally negative* but not always significant;
- the *private/public differential is also small* and, controlling for other factors, in most cases insignificant.

83. **Institutional variables such as tenure, size of firm, industrial sector fail to produce significant results**, as in the previous case of the pooled regressions. This is also the case of more elaborate regressions that have updated previous estimates and are reported in Appendix Table A2.2. An additional observation from these regressions is that over time the regressions explain less of the variance of earnings. This suggests that the effects of the variables included in the analysis have become less systematic over time, and is consistent with the hypothesis that the industrial relations system in BH is in a state of flux, an issue examined in the next chapter.

Table 2.11a											
Regressions Results for Male Employees Aged 25-55 With Positive Earnings (between KM40-KM4000), 2003											
Dependent Variable: Log (Monthly Usual Earnings)											
FBH											
Constant	3.22	3.15	1.95	1.87	1.87	2.25	2.00	2.32	3.56	2.59	2.83
Ln (hours)	0.62	0.63	0.63	0.62	0.62	0.55	0.62	0.61	0.59	0.57	0.46
Education (yrs)	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.50	0.05
Vocational		-0.21	-0.22	-0.21	-0.21	-0.22	-0.21	-0.21	-0.22	-0.19	-0.20
Age			0.06	0.07	0.07	0.06	0.07	0.06	0.07	insign	0.06
Age- squared x 100			-0.08	-0.09	-0.09	-0.08	-0.09	-0.07	-0.08	insign	-0.07
Waitlisted				-0.70	-0.70	-0.69	-0.73	-0.72	-0.59	-0.69	-0.56
Second job				insign	insign	insign	insign	insign	insign	insign	insign
Tenure					insign	insign	insign	insign	insign	insign	insign
Public sector						insign				insign	(-.13)
Private sector						insign				insign	insign
Informal							-0.12	insign		insign	
Company size								insign		insign	insign
w/industries (sign/insign)									12/13		1/13
R2	0.14	0.17	0.18	0.20	0.20	0.19	0.21	0.16	0.22	0.16	0.21
N	582	582	582	582	582	562	582	467	557	459	455
RS											
Constant	3.34	3.34	2.87	3.01	2.98	2.92	2.99	2.89	3.02	2.98	3.00
Ln(hours)	0.52	0.52	0.52	0.52	0.51	0.46	0.50	0.59	0.51	0.53	0.51
Education (yrs)	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04
Vocational		-0.23	-0.24	-0.25	-0.24	-0.24	-0.24	-0.29	-0.23	-0.27	-0.24
Age			insign	insign	insign	insign	insign	insign	insign	insign	insign
Age- squared x 100			insign	insign	insign	insign	insign	insign	insign	insign	insign
Waitlisted				-0.53	-0.50	-0.48	-0.50	-0.44	-0.44	-0.42	-0.40
Second job				insign	insign	insign	insign	insign	insign	insign	insign
Tenure					-0.04	insign	-0.04	insign	-0.05	insign	insign
Public sector						insign				insign	insign
Private sector						0.28				insign	insign
Informal							insign	insign		-0.19	insign
Company size								insign		insign	0.04
w/industries (sign/insign)									0/13		0/13
R2	0.14	0.18	0.18	0.20	0.22	0.26	0.22	0.25	0.27	0.28	0.36
N	415	415	415	415	413	402	413	340	401	330	329

**Table 2.11b**  
**Regressions Results for Female Employees Aged 25-55 With Positive Earnings (between KM40-KM4000), 2003**  
**Dependent Variable: Log (Monthly Usual Earnings)**

FBH											
Constant	2.54	2.40	3.16	2.85	2.92	2.25	3.20	2.66	3.54	2.37	2.17
Ln(hours)	0.65	0.68	0.68	0.71	0.70	0.57	0.65	0.71	0.62	0.60	0.64
Education (yrs)	0.08	0.09	0.09	0.09	0.09	0.08	0.08	0.07	0.08	0.07	0.06
Vocational		-0.27	-0.28	-0.26	-0.25	-0.24	-0.27	-0.32	-0.24	-0.32	-0.29
Age			insign	insign	insign	insign	insign	insign	insign	insign	insign
Age- squared x 100			insign	insign	insign	insign	insign	insign	insign	insign	insign
Waitlisted				-0.67	-0.68	-0.74	-0.66	-0.67	-0.64	-0.66	-0.65
Second job				insign	insign	insign	insign	insign	insign	insign	insign
Tenure					insign	insign	insign	insign	insign	insign	insign
Public sector						0.94				insign	insign
Private sector						0.84				insign	insign
Informal							-0.50	-0.32		-0.28	insign
Company size								insign		insign	insign
w/industries (sign/insign)									1/13		0/13
R2	0.25	0.29	0.29	0.32	0.32	0.42	0.38	0.33	0.43	0.34	0.40
N	258	258	258	258	258	250	258	228	245	220	215
RS											
Constant	3.00	2.94	3.10	3.18	3.20	3.10	3.54	4.18	3.14	4.03	4.44
Ln(hours)	0.47	0.49	0.50	0.50	0.49	0.46	0.47	0.22	0.55	0.21	0.24
Education (yrs)	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.08	0.06	0.08	0.08
Vocational		-0.10	-0.09	-0.08	-0.08	-0.08	insign	-0.90	-0.08	insign	-0.15
Age			insign	insign	insign	insign	insign	insign	insign	insign	insign
Age- squared x 100			insign	insign	insign	insign	insign	insign	insign	insign	insign
Waitlisted				insign	insign	insign	insign	insign	insign	insign	insign
Second job				insign	insign	insign	insign	insign	insign	insign	insign
Tenure					insign	insign	insign	insign	insign	insign	insign
Public sector						insign				insign	-0.27
Private sector						insign				insign	insign
Informal							-0.23	insign		insign	insign
Company size								insign		insign	insign
w/industries (sign/insign)									0/13		1/13
R2	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.22	0.33	0.22	0.44
N	245	245	245	245	244	237	244	206	237	202	201

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# CHAPTER 3: THE CHANGING INDUSTRIAL RELATIONS FRAMEWORK

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## Introduction and Summary

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84. **BH has made significant progress in reforming previously rigid labor market legislation to better serve the needs of the emerging market economy.** The Labor Laws in the two Entities are fairly harmonized, and both set a comprehensive but relatively flexible broad framework that is subsequently used for negotiations between the social partners. More specific wage and employment provisions are delegated to rather detailed general, branch and company agreements. In turn, the provisions of collective agreements can be adjusted (and become more favorable to workers) by enterprise rule books and individual contracts with additional variations across Entities, sectors and cantons.

85. **At the same time, the system of industrial relations is evolving and is far from being coherent.** For example, there is considerable inflexibility in some statutory provisions while there are also some regulatory gaps. To a large extent, the current laws and regulations seem to be the consequence of “path dependence” and fulfill the need for a symbolic basis upon which the parties would agree to interact.

### *Findings*

86. **While some or many of their provisions might be evaded selectively or by the labor market at large, collective agreements can still have a substantial negative effect in some industries and sectors.** Collective agreements are clearly enforced in some public sector enterprises, and rigid regulations might also be responsible for the increase in the size of the informal sector. But not all collective agreement provisions are observed, and not in all parts of the labor market - although it is generally understood that all employers are bound by the *general* collective agreements, systematic enforcement of *branch* collective agreements outside the broadly defined public sector has been limited. Many *de novo* private sector companies in the formal sector comply with only parts of general collective agreements, if at all. Likewise, many State-owned and privatized companies, while formally covered by such agreements, avoid or evade some of their provisions due to the state of their financial conditions. For example, the heating allowance in the RS, although included in collective agreements, no longer appears to be paid by most enterprises.

87. **Private employers retain a substantial degree of flexibility compared to the majority State-owned sector.** Unless the Government decrees an extension of the provisions of collective agreements to non-participating companies, the private sector is relatively free to set wages, hours, and other working conditions. Unless unions are present at the individual company level

and demand to bargain, “this collective bargaining situation – apart from the absence of a regulatory regime to establish and police bargaining rights – is notably flexible”.<sup>36</sup>

88. **At the same time, there are obstacles to smooth labor adjustment driven by gaps in legislation and inadequate practices.** The labor legislation in BH has no provisions for layoffs that can help companies respond, at least temporarily, to shocks and thus be given a chance to recover and meet their financial obligations, while allowing workers in the meantime to engage in alternative employment. Instead, labor adjustment in BH has historically taken the form of: (a) excess workers stopping work at SOEs when such work does not exist, while (b) remaining nominally, or fictitiously, on the books of the enterprises and accumulating wage and social insurance arrears (while working, at least some of them, in the informal sector). This was aided by the fact that labor regulations stipulate that the employer must retain a worker’s workbook until separation of employment occurs, at which time he must stamp it with the termination date (thus testifying that social insurance contributions have been paid) and return it to the worker. Therefore, the effects of a legislative vacuum (lacking policy for layoffs) are accentuated by an administrative vacuum arising from outdated arrangements for tracking a worker’s social insurance history.

89. **Flexibility through non-enforcement of collective agreements is generally undesirable.** Non-enforcement of rigid regulations leads to informality, which creates rents for officials and uncertainty among employers and new investors, and leaves workers without protection (such as social insurance coverage).<sup>37</sup>

90. **The characteristics of the industrial relations system are nevertheless changing over time both *de facto* and also because existing arrangements are being renegotiated.** There is an emerging group of companies in the private sector and new employers’ associations. There are also changes in the trade union structure and, together with higher private sector participation, they have initiated negotiations for new general collective agreements to replace those agreed in 2000. In the FBH, the social partners agreed a new GCA in August 2005, which introduces a new system of minimum wage determination, but which leaves many provisions unchanged compared to the 2000 GCA. Tripartite bargaining is being strengthened through the Entity ESCs, while the creation of a State level Council is being anticipated. Negotiations seem to be focusing on the “price of labor” (such as minimum wage determination, rate of overtime premiums, and whether the seniority allowance that a worker accrues while he works continuously for one company is transferable, in case of a job change, to the new employer); however, bargaining needs to take into account what is being and what can be realistically enforced.

### ***Recommendations***

91. **BH still faces the need for substantial enterprise restructuring and adjustments in the workforce of SOEs and in mass or voucher-privatized companies (MVPs).** As will be discussed in this chapter, BH’s overstaffing problem is specific and grave, as evident in the emergence of a “fictitious employment” problem, which does not appear to be solvable by applying the current statutory provisions with respect to employment termination, such as severance awards.

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<sup>36</sup> Firkin, 2004.

<sup>37</sup> This is consistent with experience from elsewhere in ECA. See World Bank (2005), “Enhancing Job Opportunities in Transition Economies of Europe and Central Asia”.



92. The analysis in the report points to the following four main areas of policy reforms in the labor market of Bosnia and Herzegovina:

**A. Create a leaner but more enforceable set of labor regulations:**

- *Allow for a gradual reduction of the FBH minimum wage as a share of the average wage.* The FBH minimum wage, currently at 55 percent of the average wage, is one of the highest in a regional comparison, and a gradual reduction could open the way for more wage flexibility, especially in companies under stress, and prevent the loss of formal sector jobs and a further informalization of the economy.
- *Introduce a separate minimum wage for the youth.* Commonly practiced in many countries, this measure may help address the currently high unemployment rates among the youth of BH.
- *Rationalize and simplify the system of “coefficients” and other aspects of wages, employment and benefit determination.* For example, there is no obvious justification for supervisors to have more credentials than their supervisees, or mechanical linkages of wages to the education of the workers or the portability of seniority premia to new employers (see Box 3.1)
- *Reduce the duration of maternity leave and pay maternity benefits through the social protection system* (instead of effectively leaving it to the employer). The one-year maternity leave duration in BH stands out in a European comparison, and possibly acts as a barrier to female employment. With female labor force participation low in BH, the authorities might want to review the legislation and shorten maternity leave duration.

**B. Review the system of payroll contributions**

- *Integrate non-wage benefits into the taxable base in the FBH,* where workers’ allowances are neither transparent (“monetized”) nor included in the social contributions base. This reduces the financing of social insurance systems and leads to inequities.
- *Harmonize systems of payroll contributions and rates between the Entities.*

**C. Review systems of collective bargaining and wage determination**

- *Separate public sector wage determination from that in the private sector.* The minimum wages prescribed by the current collective agreements- and employment conditions apply equally across employers irrespective of corporate identity (such as state, cooperative, mixed or private), while most countries have separate laws on civil service employment including separate minimum wages and wage grids.
- *Limit collective agreement coverage to those enterprises that are represented in bargaining.* To preserve the voluntary principle of tripartism, the Government and social partners involved in bargaining could refrain from exercising its authority to extend collective agreements coverage to those who have not voluntarily signed them.
- *Define criteria for representation of social partners* involved in tripartite bargaining. The labor legislation in BH does not set out clear minimum membership criteria and verification procedures for the representation of social partners in bargaining.
- *Align legislation in the RS on “occasional” or “temporary” work* with similar provisions in the FBH.

#### D. Facilitate labor adjustment and stop the flow of new “fictitious” workers.

- *Promote enterprise restructuring and free up labor currently held up in fictitious and unproductive employment.* The State-owned enterprise sector remains overstaffed, and there is evidence of “fictitious” and unproductive employment of workers. Some workers, while formally employed in SOEs, are actually working in the informal sector, while others are lingering on in their enterprise in unproductive employment. While the full extent of “fictitious” employment and overstaffing across the enterprise sector as a whole is uncertain, enterprise surveys suggest that the SOE sector remains substantially overstaffed, seen as providing a major obstacle to restructuring. This suggests that the authorities need to push ahead with enterprise restructuring, including privatization and bankruptcy procedures, and release excess employment to allow for a reallocation of labor to more productive employment.
- *Develop an alternative to workbooks* (for social insurance purposes), and more generally, improve administrative arrangements in the labor market. The current workbook system, serving as the main employee record-keeping mechanism, prevents the spread of part-time employment. It has also contributed to the emergence of the fictitious worker problem. Similarly, vague administrative requirements might determine that a worker is not eligible for health/pension benefits while he/she can no longer continue performing his/her tasks; the (social) cost of this outcome is then passed on to employers who are required to offer continuing employment.
- *Introduce legislation to address temporary layoffs:* Common in many countries but lacking in the labor regulations in BH, temporary layoff legislation can help avert the reoccurrence of a fictitious worker problem in the future. Also, there is an absence of a mechanism for insuring employers against stoppages or closure of operations when no fault is involved (such as *force majeure*) to enable them to continue meeting their financial obligations to workers.

##### **Box 3.1: Selected provisions of collective agreements that could be revisited:**

- The *seniority premium* is currently portable between employers in the RS (The new FBH GCA limits the seniority allowance to the same employer). However, opportunities for employment among jobseekers are reduced, if the wage the employer *must* pay is higher than the one the job-seeker is prepared to accept. Thus, wages above the minima provided by regulations should be negotiable between employers and workers and, if the experience of a worker justifies, he/she can be paid more.
- There is an automatic link between education and wages through the *education coefficients in wage determination*. However, many jobs involve multi-tasking and on-the job learning which is not reflected in such rigid wage-setting rules;
- There is no obvious justification for the mechanical requirement for *supervisors to have higher formal credentials than supervisees*.
- The RS collective agreements *cap occasional or temporary work* to certain numbers of days or hours per year. This has no obvious benefit to the workers, limits employers' flexibility and is difficult to police.
- There is a lack of mechanism for *insuring employers against stoppages or closure of activities* when no fault is involved so that an employer can meet his/her financial obligations to workers. This problem is currently “solved” by a unilateral obligation placed upon employers to meet their financial obligations even under such conditions (This provision has been removed in the new FBH GCA adopted in August 2005, but remains in the RS GCA). This can be more appropriately addressed by introducing voluntary arrangements among employers complemented by the development of supportive insurance provisions.
- Vague administrative requirements may determine that a worker is not eligible for health or disability pension benefits while he/she can no longer continue performing his/her tasks. As in the previous case, the (social) cost of this outcome is passed on to employers who are required to offer continuing employment.

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## A. The Changing Institutional Framework

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93. **BH's system of collective bargaining traces its roots from the former Yugoslav system of self-management.** Under self-management, there were few companies that were private in the conventional use of the term. Wage and employment conditions were set mainly by Government and trade unions, with the Government setting the firm's wage bill oriented by social considerations. The intra-enterprise income redistribution, in terms of individual worker salaries and benefits, was then decided collectively within the company's overall wage allocation. The 1988 Yugoslav Law on Enterprises effectively abolished self-management and introduced the right of an employer to layoff workers, albeit basically at high cost. With respect to wage determination, the Law introduced a system of new provisions through laws, collective agreements and incomes policy to replace the self-managed system<sup>38</sup>. A Yugoslav Labor Law was adopted in 1989 and fostered the role of collective bargaining in wage determination. Subsequently, the Entities introduced their own Labor Laws in 2000 which were supplemented by General Collective Agreements (in 2000 and 2005 in the FBH; and in 1999 but amended in 2001 in the RS). The provisions of the Entity Laws and Collective Agreements as well as the organization of Collective Bargaining (tripartism) are examined below.

### *Labor Laws*

94. **Both the RS and the FBH have substantially revamped their labor laws with the aim of introducing more flexibility and to promote job creation.** The Labor Law of the FBH was published in the Official Gazette in 1999 and substantially amended in 2000. The Labor Law of RS was published in 2000. Both laws set the minimum labor standards<sup>39</sup> and the broad framework for obligations and rights of both parties (employers and workers), as well as for the determination of wages and employment conditions (including collective bargaining). Both leave a lot to be decided at the more decentralized level from general and branch collective agreements to company rulebooks and the individual employment contracts<sup>40</sup>.

95. **Compared to previous legislation, the Laws increased employment flexibility by reducing obstacles to hiring and firing and allowing contracts of limited duration and part-time employment.** They also curtailed severance obligations and stipulated a mechanism to end the status of waitlisted workers (see below). The Laws provide for collective agreements and set rules for the representation of workers and employers. Neither law mandates a continuation of the system of wage determination through labor coefficients (see below), some of which are no longer appropriate for the BH labor market.

96. **The two Entity Labor Laws are parallel in many respects but deviate in others.** A detailed comparison of the Labor Laws is presented in Box 3.2. For example, in the area of labor inspection, the systems of administration and enforcement differ. While the RS requires all contracts to be in writing, the FBH law permits a contract to be oral, and, if there is no written statement governing its duration, the contract is presumed to be (in a contestable way) for an indefinite period<sup>41</sup>. The extent of unwritten contracts in the FBH is not known, although consideration should be given to correcting this aspect of the FBH law, in efforts to formalize

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<sup>38</sup> Vodopivec (1991), The Transition of the Yugoslav Labor Market: Crossing the Rubicon of Job Security, mimeo

<sup>39</sup> For example, both Laws protect minors and forbid discrimination on a variety of grounds, such as union membership or activity, race, sex, religion, political opinion, and ethnicity.

<sup>40</sup> In the FBH also Cantonal legislation.

<sup>41</sup> Oral contracts may enable an employer to deny his/her commitments, although they may also give rise to unjustified claims by the worker.

employment and widen the coverage of social insurance.<sup>42</sup> In both the FBH and RS, full time employment may be considered temporary, but only if it does not exceed two years' service. If a contract is of indefinite duration, termination must involve a cause and will require compensation (see below). The FBH treats contracts for seasonal and temporary work as contracts of fixed duration. The RS limits the annual length of contracts for work of an "occasional" or "temporary nature" to a maximum 150 hours of work per year. Both Laws permit part-time employment. And both limit the amount of overtime that can be required, with a minimum of 30% premium for overtime pay in the RS, while in the FBH this figure is governed by collective agreements<sup>43</sup>. Lastly, although such limits can be restrictive, neither Law provides caps for the use of contracts of limited duration or of part-time employees as a percentage of the employer's workforce.

**97. The two Entities have provisions for termination due to economic reasons and collective redundancies.** For example, the FBH Law allows for the termination of employment for "justified economic, technical or organizational reasons". The employer should, however, exhaust all possibilities for the worker(s) to be internally transferred and retrained, if needed. For collective redundancies,<sup>44</sup> the employer should consult with the works council in the enterprise or, in the absence of a works council, with all trade unions representing at least 10% of employees. Similar provisions are found in the RS Labor Law. Both Laws also provide that a contract of employment may be terminated due to an employee's breach of obligations, non-performance, absenteeism or misconduct.

**98. This suggests that the Labor Laws *per se* do not unduly restrict flexibility in the labor market.** Unless the Government introduces legislation that would enforce collective agreements to non-participating parties in the private sector, private sector employers are free to set their wages, hours, and other working conditions, the latter subject only to the statutory minima set out in the Labor Laws. Overall, some note that the major problem in BH is not the inflexibility of the system of employment protection legislation, but because "the Labor Laws are, to a considerable extent, ineffective and widely ignored".<sup>45</sup> Perhaps as much as half the labor force works in the informal sector, resulting in a significant number of employers not paying the employment-based taxes (even current wages), some perhaps engaging in overtime work without additional compensation, and others being compensated at a rate below what the law mandates. In effect, the difficulties seem to be related to the perpetuating structure of the economy (where the formal sector is dominated by SOEs and where the informal sector is large), as well as the continued reliance on prior modes of thought (as in the case of wage coefficients of the BCAs) that are no longer appropriate for a market economy.

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<sup>42</sup> Finkin (2004).

<sup>43</sup> The overtime premium stands at 50 percent though it is currently subject to renegotiation.

<sup>44</sup> Collective redundancies refer to the termination of employment of 10 percent or more of workers (but no less than 5 employees) in workplaces of more than 15 employees over a period of 3 months.

<sup>45</sup> Finkin 2004.

### Box 3.2 Commonalities, differences and gaps between the FBH and RS Labor Laws

#### Common features in the laws and regulations of the two Entities:

- Compared to pre-2000 provisions, the Labor Laws have increased employment flexibility by reducing obstacles to employment adjustment subject to payment of termination benefits. They also allow contracts of limited duration and part-time employment and permit redundancies for economic, technical and organizational reasons;
- Employers are free to form or join any employers' association, and employees are free to form or join any union. However, "tripartism" is underdeveloped partly because of the embryonic state of the conventional private sector. *Collective bargaining is still being dominated by the Government and by worker representatives from the formal/public sector, while there is low or minimal private employer representation.* The way collective agreements are determined has generally preserved (and in most cases, upgraded) the employment conditions of workers in the formal sector, but with practically no provision for declining sectors, the general health of the macro economy and the fate of workers outside the formal sector – including that of the unemployed;
- Individual contracts of employment can set out salary, benefits, hours and other elements of employment conditions. *Thus there is plenty of scope for individual "bargaining" although contracts must conform to a collective agreement, if such exists and if it applies to the employer;*
- The GCAs specify many benefits, some of which are clearly justified (such as those that relate to overtime or dangerous work). Others are more social in nature (such as for illness, family, death), suggesting this might be more appropriately addressed under social policies;
- Importantly, *neither Labor Law mandates a continuation of the system of wage determination through "coefficients" as currently provided in the BCAs;*
- The regulatory system has yet to come up with a solution to the problem of "fictitious employment" of thousands of workers who remain nominally employed in the formal yet inactive SOEs and MVPs;
- *Employment records are testified through "work books" whose objective is mainly to keep track of the worker's social insurance contributions and whose logic was based on the previous paradigm (before the transition) of more or less full-time continuous employment;*
- *The impact of the industrial relations setting varies from no effect in the uncovered sector to more or less similar, but often small, effects in the covered sectors in both Entities.*

#### Legislative gaps in both Labor Laws, or areas where they are not explicit enough:

- The Labor Laws are not clear about the role of collective bargaining in the private sector as a means of regulating wages, hours, and conditions of employment.
- Neither Law defines what the parties must bargain about (apart from what is delegated to them by the GCA), how and when collective agreements should be renegotiated and what conduct would amount to a break down of the negotiations. Although both Laws provide for works councils and set out dispute resolution procedures (including arbitration), no accompanying mechanisms are prescribed for effective implementation of either.
- There are no provisions for temporary "lay offs" as an alternative to directly discharging employees due to bleak economic conditions - a means which might enable the employer to remain current in his/her financial obligations and at same time allow the worker to engage in alternative employment elsewhere;
- There are no insurance mechanisms for covering the effects of natural disasters, with employers expected to fulfill their financial obligations even when production is impeded or stopped for reasons beyond their control;
- There seems to be a vacuum in addressing the issue of disability when an employee is deemed unable to perform his/her duties by the employer and has been refused support by the social insurance authorities.

#### Significant differences between the Labor Laws of the two Entities:

- *Employment contracts in the RS must be in writing while these can be oral in the FBH;*
- *The RS puts a cap on the number of days or hours per year that one can be employed on work of "occasional" or "temporary" nature, which has no obvious benefits to the workers involved, limits employer flexibility and is difficult to police. There is no equivalent provision in the FBH Labor Law.*
- The Labor Law in the FBH delegates the determination of minimum wages to the GCA, *currently prescribing an hourly minimum wage of KM 1.75 net which represents 55% of the net average wage in the FBH in June 2005.* The determination of the minimum wage is less straightforward in the RS but amounts to around 26% of the gross average wage.
- Maternity and other benefits are subject to different administrative and financial provisions;
- There are differences in the *definition of binding-ness of bargaining.* In the FBH, collective agreements may either be territory-wide or not, and bind only those employers and only those union members who signed them. The RS law is less clear, stating that agreements are "mandatory" for those who were represented in the negotiation process. In practice, the currently valid GCAs have an economy-wide coverage, while BCAs are

## *Collective Agreements*

99. In line with the Labor Laws, general and branch collective agreements set the details of the labor market framework such as mechanisms of wage determination and adjustments, working time, worker protection and benefits, regulations governing termination of employment and conditions for trade union activities. The provisions of collective agreements at general and branch level are extensive, as indicated in Table 3.1 (and specific details are presented in Appendix 4). In the FBH, all the Labor Law provides is that collective agreements can be territory-wide or not, and multi-employee or not; they can be bargained by one or more employers and by one or more unions; and they bind only those employers and those union members who have executed them. The RS law states that agreements are “mandatory” for those who were represented in the process but allows the same flexibility of participation as in the FBH. Thus, both Labor Laws prescribe that collective agreements are binding only for those parties who have directly participated or have been represented in the process of concluding the agreements<sup>46</sup>.

**Table 3.1: Indicative List of Benefits in Branch Collective Agreements**

Benefit categories and benefits		Entity
<b>Standard Supplements</b>		
1	Seniority - increment for each additional year (transferable to new employer)	both
2	Annual leave grants	both
3	Hot meal allowance	both
4	Transportation to work (GCA in FS, rule book in FBH)	both
5	Funds for heating and winter food providing	RS
<b>Hours of work (except during normal workweek)</b>		
6	Overtime	both
7	Night work	both
8	Work on weekends	both
9	Work on state holidays	FBH
<b>Away from duty station</b>		
10	Field work (if employee is not coming back home)	both
11	Fixed Supplements	both
12	Per diem - for trips	both
13	Living separate from the family - for more than 2 months (based on last min Federal wage)	FBH
<b>Conditions of work, health and safety, injury</b>		
14	Exposure to noise, dust, positioned vapor	Both
15	Work where additional safety equipment is required	Both
16	Increased danger of explosion, flood etc	RS
17	Danger of getting severe injuries	FBH
<b>Leave</b>		
18	Paid leave for holidays	Both
19	Participation in cultural and sport events	FBH
20	Blood donating	Both
21	Seeking for close family member missing in the war	FBH
22	Seeking of the close family member	FBH
<b>Illness/Injury/disability</b>		
23	Sick-leave due to injury at work (based on last month's basic wage (no allowances))	FBH
24	Heavy disability of the employee	RS
25	Long illness or injury of the employee	RS
26	Illness of the close family member	both
<b>Marriage/ Birth/ Death</b>		
27	Marriage (own)	both

<sup>46</sup> However, the Government can extend the coverage of the agreements, or parts thereof, across the economy.

Benefit categories and benefits		Entity
28	Child birth	both
29	Marriage of the child	FBH
30	Death of the employee	Both
31	Death of the retired employee (based on last reported average Federal wage)	FBH
32	Death of family member (grandparent, parent, in -laws, spouse, child grandchild brother or sister)	Both
<b>Other</b>		
33	Moving households	Both
34	Education	FBH
35	Social benefits	Both
36	Special stimulations (voluntary)	Both
<b>Worker Separation</b>		
37	Natural disaster	Both
38	Temporary redundancy	RS
39	Dismissal (based on worker's last monthly wage -- for each year of work)	FBH
40	Regulating the right to retirement	Both

Source: Select Entity branch collective agreements

100. **Nevertheless, according to the GCA in the FBH, all employers, public and private, are in theory bound by the provisions in the general collective agreement<sup>47</sup>.** There are differences of opinion as to whether and the extent to which collective bargaining is binding. In the FBH, collective agreements can be territory-wide or not, and bind only those employers and those union members who have signed them. The RS law is more cryptic, stating that agreements are “mandatory” for those who were represented in the negotiation process<sup>48</sup>. In practice, the currently valid GCAs have an economy-wide coverage, while BCAs are largely limited to the SOEs and privatized former State-owned sectors. In the RS, the GCA was signed on behalf of all employers by the Chamber of Commerce<sup>49</sup>. Although it is generally understood that all employers are bound by the GCAs, effective coverage of the BCAs outside the broadly defined public sector<sup>50</sup> has been limited, especially in the *de-novo* private sector<sup>51</sup>. Only recently, steps have been taken in the RS to introduce a separate system to determine wages and work conditions in the civil service (see Box 3.3).

<sup>47</sup> According to Article 2 of the new FBH general collective agreement, “The Collective Agreement is binding and it applies to all economic companies regardless of the ownership structure of capital in them, administrative bodies and services for administration, public institutions and other legal subjects.”

<sup>48</sup> Again, one may argue that since the Chamber of Commerce in the RS negotiated on behalf of the employers and membership to the Chamber is compulsory, there is potential for interpreting the coverage of the GCA as compulsory for all.

<sup>49</sup> The amended Article 81 of the RS general collective agreement, signed on behalf of employers by the RS Chamber of Commerce, states: “This collective agreement is related to all employed in Republika Srpska regardless on character of ownership and form of employer and trade union organizing.

<sup>50</sup> Including the civil service as well as publicly owned industrial and service sector companies.

<sup>51</sup> At the time of signing the BCAs, the size of the *de novo* private sector in BH was significantly smaller than today. Many new private employers are currently following their own company rules on wage determination and worker entitlements.



### Box 3.3: RS Draft Civil Service Law

The RS has produced a pre-draft law on wages of civil servants in the Entity. Though no explicit minimum wage is specific, the minimum rate listed in the draft is around KM300. In many cases, minima are prescribed within a range, for example, 300-600 which seems rather a wide range for those in the same job category. The pre-draft law does not include provisions for indexation (inflation adjustment). However, it provides that wages can be reduced by the percentage decline in budgetary revenues, if this was the case. This introduces an element of fiscal constraint. The seniority allowance is set at 0.50% but without a cap (say, after 20 years). Merit increases are allowed but capped at 10%. There is a provision that if paid salaries are below the planned ones (for example, before of termination of employment for some workers) then the released budget can be used for increases of remaining employees. In general bonuses for overtime, holiday and other reasons are relatively reasonable compared to collective agreements. An innovative aspect is the provision for managers (in the civil service) to face financial penalties if they wronged their subordinates in compensation issues. A maintained feature is the relatively narrow range of prescribed wages: for example, salaries of academic staff (Article 51) range from KM1100 for starting lecturers, to KM1700 for full professors/deputy chancellors.

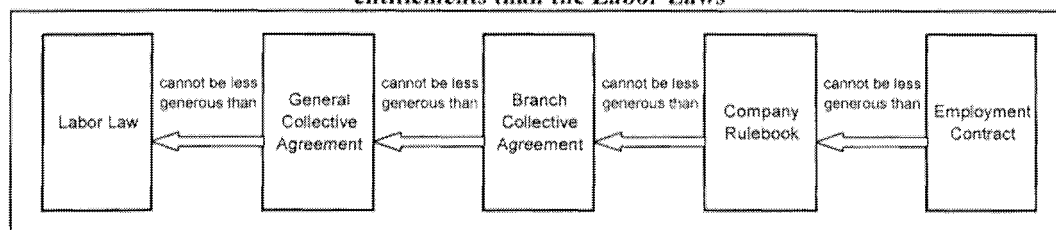
While the separation of civil service pay determination is a move in the right direction and the pre-draft law has a number of innovative provisions, the proposed law may result in an increase in the public sector wage bill by 30% (by KM11m from KM32m). Given the already high share of overall expenditure on the public sector wage bill, adjustments will be required.

Source: Republika Srpska: Ministry Of Local Administration and Self-Governance (November 2004) Pre-Draft Law on Wages in Civil Service Institutions and Public Services, Banja Luka.

101. **The Labor Laws are rather vague on what the duty to bargain entails at the branch or enterprise level**, for example, about what subjects the parties can bargain about (apart from what is delegated to them by the GCA) or what conduct would amount to a breakdown of negotiations. Although both Laws set out dispute resolution procedures (for example, arbitration), they have not been accompanied by the issuing of supplementary legal instruments that would implement the Laws<sup>52</sup>.

102. **As is common in legislation found in other countries, voluntary arrangements between workers and employers cannot go beyond the minimum provisions prescribed in the Labor Laws.** Thus the GCA cannot, for example, provide a more limited scope of rights than those provided by the Labor law, while the BCAs can only stipulate entitlements and provisions more generous to the worker than the GCA. In turn, individual agreements and employment contracts need to compare favorably to branch agreements.

Figure 3.1 Collective agreements at all levels either confirm provisions or set more generous worker entitlements than the Labor Laws



103. **The Labor Laws grant flexibility with respect to the duration of collective agreements.** Agreements can either be open-ended or fixed-term. The 2000 FBH GCA was

<sup>52</sup> And it is doubtful whether experienced arbitrators exist.



supposed to be in place for one year. However, it contained a provision that, upon its expiration, it was to remain in force until a new agreement could be reached. This has been the case until the new GCA was signed in August 2005, and which now has an open-ended duration. The current RS GCA has an open-ended duration as well. The FBH Labor Law leaves it to the collective agreement itself to specify rights of parties to walk away from the agreement, and the currently valid GCA allows all parties to start the initiative to amend the agreement. The RS Labor Law allows each party to terminate the agreement upon a notice period of 30 days, but defers to the agreement itself to specify details.

### *Organization of Collective Bargaining*

104. **Until recently, the system of industrial relations in Bosnia and Herzegovina has been almost exclusively dominated by the Government (in its dual capacity as Government and employer) and public sector trade unions.** Breaking with this tradition of Government domination, the private sector employers' association was co-signatory of the most recent GCA was signed by the in July 2005, alongside the Governments and the trade unions. However, the previous FBH general and branch collective agreements of 2000 were signed only by the Government and trade unions. In the RS, the Government, the Chamber of Commerce and the trade unions were signatories of the general and branch collective agreements in 1999 and amended in 2001. With the new FBH GCA retaining many of the provisions of the old GCA, this means that effectively, the core of the collective agreements pre-date the introduction of the new Labor Laws in 2000.

105. **Both parties can be represented by one or more trade union and employers' association, while the signatory representative needs to have the authorization of all participating parties.** The FBH Labor Law has provisions which allowed the FBH Entity or Cantonal Governments to represent employers prior to the formal establishment of employers' associations. In the RS, the parties to the collective agreements on both workers' and employers' side are those organizations with the largest membership, but with written consent of the other associations.

106. **In legal terms, there is notable flexibility on how wages, hours, and working conditions are set by the collective agreements, company rulebooks or individual employment contracts.** Wages, hours, and working conditions may be regulated (above statutory mandates) by collective agreements at national or branch (multi-employer) levels, or by collective bargaining at the enterprise level if the employees are represented by a union and demand to bargain. Therefore, where unions are present and demand to bargain, wage setting may be done on a consensual, multi-employer basis or on an enterprise basis<sup>53</sup>. Alternatively, in the absence of a binding collective agreement, wages and working conditions may be set by the employer in its rulebook or in the individual contract. These provisions and the absence of a regulatory regime to establish and police bargaining rights are notably flexible<sup>54</sup>.

107. **Both Entities have formed their own ESCs and preparations are under way for the creation of such a body at the State level.** Meanwhile the councils have emerged as the venue for tripartite collective bargaining and discussion of economic and social trends in the labor market in BH. The ESCs convene Government, trade unions and employers associations. Tripartism is now benefiting from more representative independent and private sector employers'

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<sup>53</sup> Although different types of collective bargaining can lead to the same or different outcomes in the labor market, there seems to be general consensus that the combination of multi-unionism and separate collective bargaining can lead to inferior outcomes, for example, in terms of productivity. See Annex 1.

<sup>54</sup> Finkin (2004).

associations arising from the growth of a new and mostly small and medium-sized private sector. However, while the FBH ESC meets regularly (typically on a monthly basis), the ESC in the RS has not been meeting frequently after the breakdown of negotiations over a new GCA in Spring of 2004. There have also been moves by both trade unions and employers' associations to create a State-level ESC<sup>55</sup>. While this council has not been officially created by the Council of Ministers yet, the employers associations in both Entities and the Brčko District have jointly founded the BH Association of Employers<sup>56</sup> in September 2004 and the two Entity trade union confederations formed a joint State-level Confederation in May 2005.

### *Trade Unions*

108. **Trade unions in both Entities mainly represent workers employed in public sector companies and mass-privatized enterprises as well as civil service employees.** There are two separate trade union confederations in BH, one in FBH and another in the RS. In the FBH, the Confederation of Independent Trade Unions of Bosnia and Herzegovina (SSSBH) has about 260,000 members, which is about 68 percent of the estimated workforce in the FBH. It is comprised of 23 industrial branch trade unions. The Confederation of Trade Unions of Republika Srpska (SSRS) has a membership of 157,000, which represents 66 percent of the workforce in the RS, and gathers 14 branch trade unions (See Figure 3.2). Membership has been declining as workers became either unemployed or surplus and stopped receiving wages ("fictitious" workers). This has consequently reduced the ability of unions to collect membership fees<sup>57</sup>. In addition, some branch unions broke out of the confederation structure (for example, the agriculture union in the FBH and union of metal and mine workers in the RS). As a result of these changes, both confederations have been entertaining plans to consolidate the branch trade union system by merging affiliate branches.

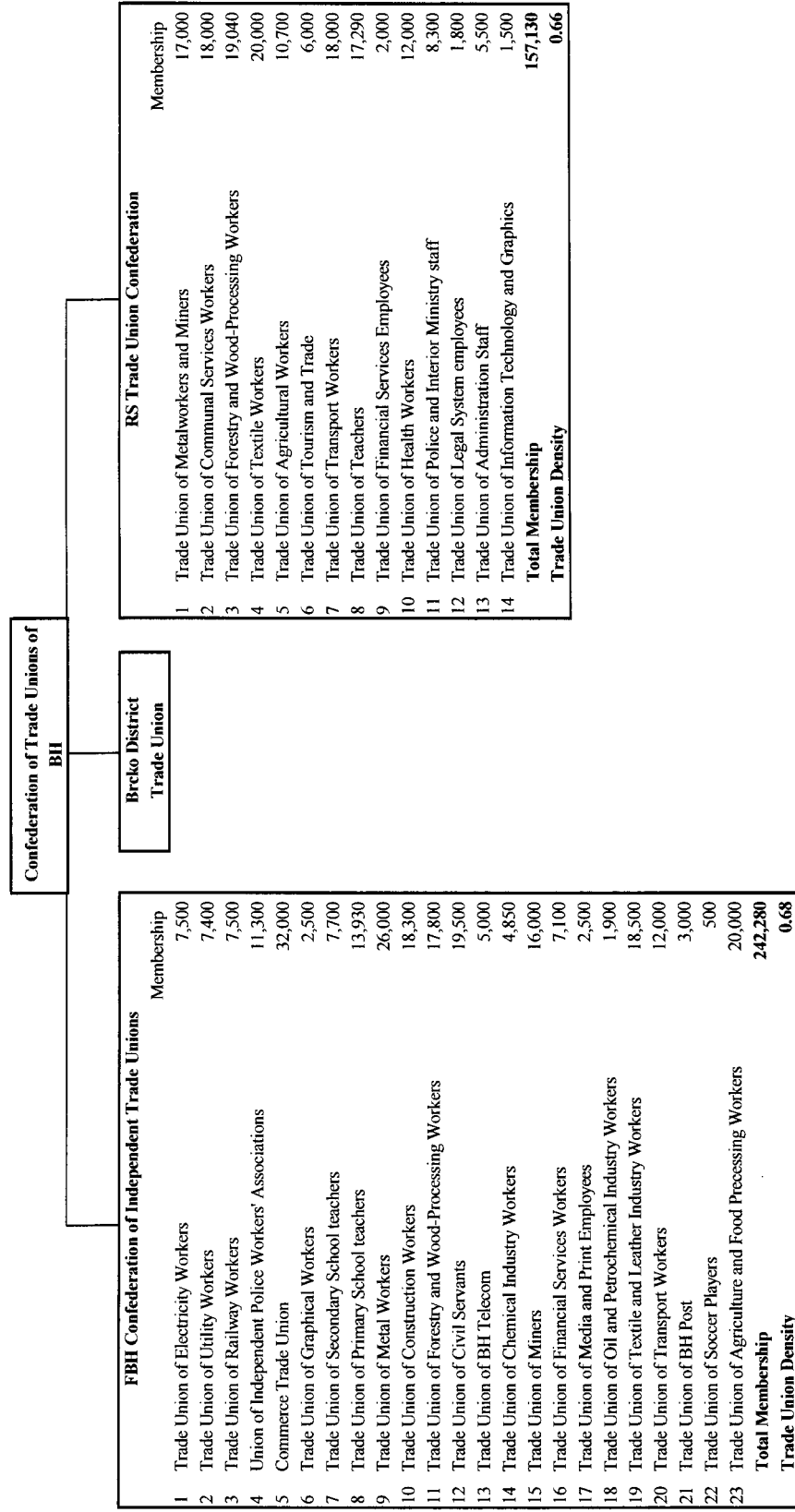
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<sup>55</sup> This is in line with the reform agenda put forward in the PRSP/MTDS. See Appendix 3.

<sup>56</sup> The BH Association of Employers comprises the RS Employers Confederation, the Union of Employers in FBH and the Female Employers' Confederation UNA Zenica.

<sup>57</sup> For example, the SSRS estimates that their true membership comprises an additional 70,000 workers who are not receiving salaries and are not paying membership fees and are therefore not included in the total numbers.

Figure 3.2: Structure and Membership of Trade Unions in Bosnia and Herzegovina, 2005



Source: Entity Trade Union Confederations

109. **The Labor Laws provide for the establishment of works councils but, as in the case of arbitration, only the barest structures for future institutional development have been laid down.** As yet, it appears that few, if any, have actually been created and, if experience elsewhere is instructive, it is unlikely that employees, especially in the smaller enterprises, will feel a need to create them. In the event that the obligation of these works councils is one of information sharing and consultation (akin to the obligation imposed by the EU directive on European works councils), the transaction cost attendant to consultation with a works council or a union would appear to be relatively low. Thus, there might be benefits to be gained in effecting a smoother transition for those who will lose their jobs. Similarly, worker representation in firms through work councils might be an efficiency-enhancing mechanism because it helps to reduce transaction costs by improving communication and intermediation. Some research confirms this view, but others have raised doubts why work councils might be better poised to circumnavigate the problems of incomplete contracts and opportunistic behavior. Probably, the most researched case in the area of economic implications of work councils is that of Germany but, if anything, the evidence is partial and inconclusive.<sup>58</sup>

### *Employers' Associations*

110. **The private sector employers' associations have been gathering strength over recent years and are now involved in collective bargaining, but their representativeness remains limited.** The FBH Union of Employers (UEFBH) represents approximately 4,100 private companies that employ around 90,000 workers mainly in Central and Western Bosnia and Herzegovina<sup>59</sup>. The UEFBH is geographically organized (not by sector or industrial branch), and is a confederation of regional small business associations (see Appendix II for membership organization). In the RS, the Employers Confederation (ECRS) represents the small but growing private sector, mostly from the wider Banja Luka area. It comprises mainly private small and medium enterprises (SMEs) and voucher-privatized former state-owned companies. Founded in September 2000, the ECRS is small compared to the UEFBH and, while it represents more than 800 companies, only 178 companies are membership fee-paying members and are employing only 6,000 people<sup>60</sup>. Its member companies are mostly active in manufacturing sectors (such as wood, paper, food and drinks, and the metal industry) as well as information technology, services, construction and wholesale sectors. While it has two collective members, the Association of Poultry Growers RS and the Association of Animal Food Producers, the ECRS, despite its name, is not organized as a confederation of constitutive associations, but of individual member companies. Alongside the ECRS, the RS Chamber of Commerce (RSCC) participates in collective bargaining in the RS on the employers' side, representing mainly voucher-privatized enterprises as well as companies with majority state ownership. In fact, employers in RS have previously been exclusively represented in collective bargaining by the RS Chamber of Commerce.<sup>61</sup> The coexistence of the ECRS and the RSCC suggests that the consolidation of the employers' representation in RS has still some way to go<sup>62</sup>.

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<sup>58</sup> Addison and Wagner (1994); Rogers and Streek (1994).

<sup>59</sup> UEFBH estimate, although it is not clear how many companies are actually paying membership fees.

<sup>60</sup> According to ECRS membership data.

<sup>61</sup> With RSCC membership being mandatory, there are concerns that the RSCC's representation in collective bargaining may be out of line with both the RS Labor Code and ILO conventions.

<sup>62</sup> The RSCC is not part of the State-level BH Employers' Association.

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## B. Determination of Wages and Worker Benefits

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111. **The Labor Laws provide for a broad framework for wage determination, but defer the process and rules to the collective agreements, company rulebook or the employment contract.** The Laws stipulate that salaries paid cannot be lower than the ones stipulated in the collective agreements, rulebooks and employment contract. They also provide for the right of salary increases for overtime, night work and work in difficult circumstances, however leave the determination of levels and methods of payment to the collective agreements and contracts. The GCAs stipulate a large number of wage and non-wage benefits. In both Entities, they regulate the minimum wage or minimum price of labor as well as its indexation, but leave the determination of individual wages to the BCAs according to a system of complexity coefficients. Overall, 40 or more wage and non-wage/employment benefits are prescribed in the GCAs with additional provisions in branch and company agreements (See Table 3.1 and Appendix I).

### *Minimum Wage*

112. **The system of minimum wage determination in the FBH is in the process of change.** In August 2005, the social partners in the FBH agreed on a new GCA. The new GCA stipulates a minimum wage on an hourly basis both in gross (KM 2.96) and net (KM 1.75) terms, and is to be adjusted “with increases in the costs of living, growth of retail prices and overall economic development” at least once per year by a decree of the FBH Government and on the basis of harmonized positions of the social partners in the FBH ESC. This minimum wage is to set the base for the coefficient-driven wage determination system set out in the BCAs. The agreed net hourly minimum wage of KM 1.75 translates into a monthly minimum wage of KM 308, if based on a monthly working time of 176 hours. This represents 55 percent of the average wage paid in the FBH in June 2005 (of KM 556), 58 percent of the 2004 FBH average wage and 166 percent of the 2004 poverty line<sup>63</sup>. However, this net wage excludes wage and non-wage allowances. The new GCA also introduces a provision, according to which “in exceptional circumstances” BCAs or company agreements can stipulate conditions, level, method and periods of determination of an alternative lower minimum wage below KM 1.25 net per hour. A net minimum wage of KM 1.25 per hour would translate into a monthly minimum net wage of KM 220, representing about 40 percent of the average wage paid in the FBH in June 2005.

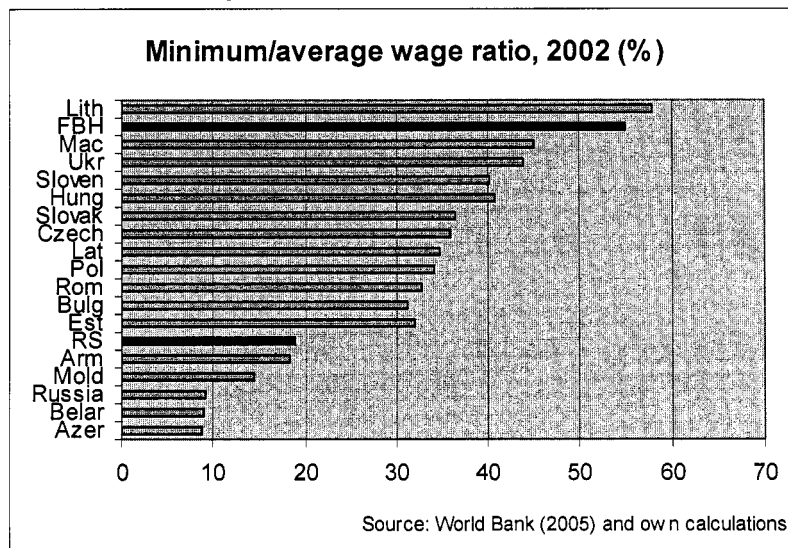
113. **Despite the replacement of the previous spiraling minimum wage indexation rule in the FBH, the level of the minimum wage remains high.** The previous FBH GCA stipulated that the minimum wage was to be determined by the BCA, but that it could not be lower than 55 percent of the average wage as published by the FBH Statistical Office and was adjusted monthly<sup>64</sup>. While the new GCA removed the spiraling average wage-linked indexation of the minimum wage, the level of 55 percent of the average wage remains. Figure 3.4 presents data on the minimum/average wage ratio for selected countries in ECA and shows that the FBH has the second highest minimum/average wage ratio (after Lithuania) within the said countries in Central, Eastern and South-Eastern Europe.

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<sup>63</sup> The poverty line for BH for 2004 has been set at KM 2223 per capita per year (Memic, 2005).

<sup>64</sup> Therefore, the minimum wage level was determined as a share of the average wage level; however the latter was ultimately determined rigidly on the basis of the minimum wage through the coefficient system set out in the branch collective agreements.

Figure 3.4 The FBH minimum wage is one of the highest in the region as a share of the average wage



114. **Some of the BCAs stipulate even higher minimum wages.** For example, minimum wages in the telecommunication and postal service sectors range between 100 and 110 percent of the average wage in the FBH, while they vary between 55 and 65 percent in other sectors. While the minimum wage in the textile sector is set at 55 percent of the average wage, anecdotal evidence suggest that a number of textile companies cannot afford to pay at that level and are in fact paying lower wages, as do companies in other sectors as well<sup>65</sup>.

115. **The new FBH provisions on the minimum wage are encouraging, but what matters is their implementation.** The introduction of a lower net minimum wage of KM 1.25 per hour, even if limited to “exceptional circumstances”, could open the way for more wage flexibility especially in companies under stress, which might prevent the loss of formal sector jobs and further informalization of the economy. Likewise, the new minimum wage adjustment mechanism allows bringing minimum wage growth more into line with the broader development of the economy instead of just indexing it to the average wage growth. However, much depends on the implementation of the minimum wage adjustment: Will the Government emerge as the dominant factor, even though the decree stipulating indexation is to be based on a consensus among the social partners? Will the Government issue decrees in raising the minimum wage even if the social partners have not agreed?

116. **In the RS, the minimum price of labor is set at a low level and does not constitute an effective binding minimum wage.** The RS minimum price of labor is determined by Government decision and has been stable at around KM 80 per month since 2000.<sup>66</sup> It is currently set at KM 82, which is 44 percent of the BH poverty line and 19 percent of the average

<sup>65</sup> FBH Ministry of Labor and Social Policy, Information on the Application of the General Collective Agreement for the Territory of FBH, July 2004

<sup>66</sup> The GCA for the RS is far more detailed than for the Federation. It is executed by the Government and the trade union confederation, but also by the Chamber of Commerce and not, notably, by the employers' confederation. Article 42 requires the parties to agree upon the establishment of the “lowest wage hour,” failing which the government of the RS is to define it. Articles 39 and 44 through 47 provide for agreement on subsequent coefficients depending on the employees' functions and working conditions. (Article 50 allows employers with insufficient funds to pay a guaranteed wage of 65 percent of the wage the employee would be entitled to under the system albeit for only a six month period.

wage in 2004. At such a low level, it is limited to providing the base for the coefficient-determined wages according to the provisions in the BCAs. Recent amendments to the RS Law on Social Contributions have raised the minimum social insurance taxable base from the minimum price of labor to the level of 50 percent of the average wage, while leaving the minimum price of labor at KM 82.

117. **Analysis of LSMS data shows that the FBH minimum wage is not fully binding.** As the analysis in Chapter 2 showed, a sizeable share of workers in the FBH report earnings less than the minimum wage, while the share of formal sector workers receiving less than 50 percent of the average wage are roughly equal in both Entities. This is despite the fact that the RS and FBH have fundamentally different minimum wage levels. A binding minimum wage in the FBH, standing at 55 percent of the average wage, would have predicted a much lower share of formal workers reporting less than 50 percent of the average wage than in the RS. The detailed analysis of this is presented in Chapter 2 of this report.

### *Wage Determination*

118. **Both Entities' collective agreements retain a "coefficient-based" and public sector-oriented wage determination system.** The RS GCA stipulates the system of wage determination based on a 'lowest hourly wage' which is multiplied by coefficients between 1 and 6, depending on the complexity of the performed work or the worker's educational attainment. The GCA specifies further that an individual's wage can be raised by a further 20 or 30 percent above the basic wage, calculated through the coefficient method, if the individual is working under "difficult work conditions" or "performs the most complex functions in the economy, social activities, state bodies and organizations". The BCAs in both Entities specify in details the criteria and corresponding coefficients for different levels of work complexity or educational attainments. The coefficients, and the corresponding wage spread, range from 1 to between 6 and 8 (see Appendix IV for more details).

119. **While binding for the State-owned and mass-privatized sectors, this wage setting rule has often not been adhered to in the new private sector.** A core element of the BCAs, this coefficient-based wage determination system has remained unchanged for the last 5 years. While being eroded in the State-owned sector for reasons of underperformance of many enterprises, anecdotal evidence suggests that it has played a minimal role in determining actual wages in the new private sector, where companies have followed their own rules. A notable feature of the Labor Law in the RS is that it allows employers with insufficient funds to pay a guaranteed wage of 65 percent of the wage the employee would be entitled to under the system, *albeit* for only a six month period.

### *Wage and non-wage benefits*

120. **While GCAs and BCAs prescribe very detailed provisions on wage and non-wage benefits, there is anecdotal evidence that some of these benefits are no longer actually being paid.** The GCAs and BCAs stipulate an extensive range of additional wage and non-wage benefits (see Table 3.1). There are diverging patterns in the structure and content of collective agreements in both Entities. In the Republika Srpska, the GCA contains very detailed provisions, and BCAs are largely synchronized with the GCA in terms of wage and non-wage benefits. The only area that the RS GCA does not explicitly legislate is the definition of the wage coefficients. In the FBH, the GCA is less detailed in its provisions than in the RS, and defers many issues to the BCAs. Moreover, the BCAs are less synchronized than in the RS, and for example provide substantially varying levels of the minimum wage ranging from 55 to 110 percent of the average

wage (See Appendix IV). While regulated in GCA and BCAs, according to anecdotal evidence some of the allowances are not paid by many companies or are paid in a manner not prescribed in the agreements, such as the winter heating allowance and the annual leave grants.

121. **Non-payment of such benefits is confirmed in the earnings analysis.** The analysis in Chapter 2 reveals that many wage and non-wage benefit provisions (such as those relating to seniority/tenure as well as the minimum wage) do not appear to have (at least a statistically significant) impact on earnings.

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## C. Employment Protection Legislation

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122. This section reviews the major employment protection provisions in the RS and in the FBH Labor Laws and collective agreements, covering termination of employment, severance, worker waiting lists, temporary and part-time employment, the employee workbook, working hours and overtime provisions, as well as leave and maternity leave provisions. It discusses the progress achieved with the introduction of the new Labor Laws and identifies remaining problems, contradictions, gaps and shortcomings.

### *Termination of employment*

123. **While significantly easing provisions on employment termination, the Labor Laws retain some surprising constraints.** For example, workers who suffer an injury at the workplace or develop an occupational disease during the period of temporary incapacity to work cannot be laid off. If the worker regains his or her work ability after treatment, he/she is entitled to return to the previous job or to be assigned to another appropriate job in line with remaining work capacity, whether such a position exists or not. While the RS Labor Law rules out the possibility of layoff of an employee based on remaining work capacity or on immediate risk of occurrence of disability, the FBH Law allows this, however it would require the consent of the workers' council (which is still not functional). With respect to collective dismissals, the previous requirement for consent by trade union or workers' council to the dismissals has been removed, while maintaining the requirement for an employer to consult, rather than seek consent of, trade unions or workers councils in companies with more than 15 workers in case of collective dismissals of more than 10 percent of the workforce over three months. These consultations are to include information from the employer to the workers' council on the reasons for termination, the number and qualification of affected employees, measures identified which might avoid termination (e.g. by re-assigning staff), and measures which would help employees to be recruited elsewhere<sup>67</sup>. While this process might require additional time compared to an individual dismissal, the laws provide no obstacle to the use of collective dismissals.

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<sup>67</sup> Laid-off workers also retain a priority for re-hiring compared to other workers with similar qualifications.



### Box 3.4: Bosnia and Herzegovina's enterprise overstaffing challenge

While new labor legislation has introduced greater flexibility in employment protection, and despite employment adjustments as evidenced by LSMS data, many enterprises, both public and private, continue to be overstaffed. As shown in this chapter, the Labor Laws enacted in 2000 have introduced greater flexibility in employment protection to facilitate labor adjustments. However, recent analyses of the enterprise sector indicates that many State-owned enterprises (SOEs), mass or voucher-privatized companies (MVPs) as well as private companies nominally maintain a workforce substantially in excess of their needs<sup>1</sup>.

Bosnia and Herzegovina faces a specific problem of substantially delayed enterprise restructuring and labor force adjustment in the State-owned and mass-privatized enterprise sector. In a recent survey of 20 strategic SOEs in the FBiH, the companies' management indicated that as much as 37 percent of the registered formal workforce may need to be laid off in these companies. In addition, many companies have failed to resolve the status of formerly waitlisted workers (see discussion below). In these 20 strategic SOEs, the number of waitlisted workers is even larger than the estimated redundancies of formally employed staff. In particular, companies retain on their books a substantial number of officially registered workers who are not actually working in the enterprises any longer (a phenomenon often referred to as "fictitious workers"). Companies in need of restructuring and workforce downsizing cannot afford to finance legally mandated severance payments or settle wage and social insurance contribution arrears for all these excess workers, but simply keep workers nominally employed, allowing arrears to continually increase. While the definitions are not clear-cut, waitlisted workers are expected to constitute the largest share of fictitious workers, although by no means the entire stock.

**Strategic SOEs still face substantial need for labor adjustment, survey of 20 strategic SOEs in FBiH, 2004**

	Number	Percent
Total Workforce	13,589	100
Active	11,494	84.6
Non-active or occasionally active	2,095	15.4
Estimated Redundancy	5,062	37.3
Total Workforce incl. Waitlisted	21,237	100
Registered Waitlisted	7,648	36.0

Source: Kadic (2004); Note: Figures based on a survey of 20 Strategic SOEs in the FBiH in April 2004, redundancy estimations based on company management own assessment. Registered Waitlisted according to Art 143 Labor Law

Continued and unsustainable overstaffing, manifest also in the "fictitious worker" problem, has resulted in growing indebtedness towards workers and the social insurance funds, while it has fuelled the informal sector. According to the legislation, the workbook is the official proof of an individual's employment and the key form of record-keeping. Because workbooks remain with their formal employer until the employment relationship has formally ceased, affected workers cannot be formally employed elsewhere. Collective agreements stipulate that the formal employment relationship only ceases once the employer has settled all outstanding claims of the worker in terms of wages, severance and social insurance contributions. Workbooks remain in the companies for as long as the employer cannot afford to settle the claims. As there is no clear definition of "fictitious" worker, there is no reliable information as to the number of workers affected and their characteristics. However, estimates suggest around 30-40,000 in the RS and around 80,000 in the FBiH.

This suggests that the authorities need to find a way to release excess and "fictitious" workers, in order to facilitate the process of enterprise restructuring and to help curb the informal sector. While the extraordinary nature of the overstaffing and "fictitious" worker problem suggests the need for a one-off program to facilitate the necessary adjustment, this report submits that future occurrence of this phenomenon can be averted, or at least reduced to manageable proportions, through the introduction of regulations that would enable lay offs.

Sources: Kadic (2004) and Stojanov (2004)

### *Notice period in case of dismissal*

124. The Labor Laws provide for minimum provisions in terms of notification periods in case of dismissal, but allow the collective agreements to regulate further. The Labor Laws prescribe a prior written notification (30 days in the RS and 14 days in the FBH) by the employers to the employee which should include reasons for said termination. The notification period may be waived if the reason for termination is serious misconduct or breach of obligations by the employee. The Laws open the possibility for collective agreements to prescribe longer notice period for staff having served longer, with the RS GCA stipulating a minimum notice period of four months for employees with over 30 years of service. While such an extension is standard in many countries, it may provide further obstacles to the adjustment in SOE and MVP workforces.

### *Severance*

125. **The Labor Laws defer the determination of the level of severance to the collective agreements, rulebooks and employment contracts, but set a minimum rule for severance** to equal not less than one third of the average monthly salary of the employee, as paid in the last three months before dismissal, for each full year of employment with that particular employer. However, the RS GCA, in an amendment agreed in 2001, raises the amount to 40 percent for individuals with an employment history of up to 10 years, 50 percent for individuals with 10 to 20 years of work history, 60 percent for those with 20 to 30 years and 70 percent for those with more than 30 years of service at the same employer. The substantial overstaffing in BH's enterprise sector and the fictitious worker problem implies a need to develop options to further relax severance provisions for regular and waitlisted workers.

### *Waitlisted workers*

126. **Both Entity Labor Laws introduced a sunset clause for waitlisted workers; however, they have failed to resolve the waiting list issue.** Worker waiting lists were an SFRY-era tool to deal with excess workers in times of economic slump as well as those whose employment had ceased in the period between December 31, 1991 and the adoption of the Laws in 2000 for political and ethnic discrimination reasons. According to the Laws, workers could remain in waitlisted status for no longer than 6 months (3 months in RS) from the day the Law took effect in late 1999, if the employer did not call the employee back to work before the expiry of this deadline. Affected individuals, if they had not in the meantime been employed elsewhere, had the right to a severance package if they approached the employer in order to re-establish an employment status by mid-2000 in the FBH and end-2000 in the RS. The Labor Laws provide for special severance regime limits for waitlisted workers, and limit severance pay to two-thirds of the average wages at the level valid when the law/amendments entered force, as measured by the Statistical Institutes. This amount is multiplied by a coefficient of 1.33 for those workers with work history of up to 5 years, by 2.00 for those with work history between 5 and 10 years, by 2.66 for those with work history between 10 and 20 years, and by 3.00 for those with work history of more than 20 years. The FBH legislation lumps together waitlisted workers and those who have effectively been dismissed after December 31, 1991 due to political and displacement reasons. The RS Law treats these separately - for waitlisted workers it simply stipulates a severance of one to four times the average salary paid in the RS in the previous three months depending on length of service, while it replicates the FBH's 1.33-3.00 coefficient solution to the '1991 workers'. However, while waitlists are now abolished under the laws, in reality they have continued in many companies (even with lower severance payments than for regular workers), and have contributed to the emergence and deepening of the overstaffing and "fictitious" worker problem (see Text Box 3.5).

### Box 3.5 The issue of waiting lists – the FBH example

The FBH Labor Law includes provisions aimed at resolving the status of previously “waitlisted employees” (a SFRY-era tool to deal with excess workers in times of economic slump) and those whose employment ceased in the period between December 31, 1991 and the adoption of the Law for political and ethnic discrimination reasons. According to Article 143, waitlisted workers could remain in that status for no longer than 6 months from the day the Law took effect in late 1999, if the employer did not call the employee back to work before the expiry of this deadline. These individuals, if they had not in the meantime been employed elsewhere, had the right to a severance package if they approached the employer in order to re-establish an employment status by mid-2000. As a result, some employers resolved the issue by paying out wages, contributions and severance payments in line with the provisions. Other employers terminated employees but failed to pay up, and the employees refused to take the terminated employment contracts and workbooks and stayed on. Yet others extended the employment status of waitlisted employees, often because of an allegedly lack of funds to pay off arrears and severance but possibly also because of the expectation that at some point the FBH Government will pay up directly.

As a result, the implementation of Article 143 has been slow beyond expectation and is far from being completed. The status of waitlisted employees in effect lives on with a considerable number of companies. Many affected employees are still ‘employed’ but often without being active, or their legal status has yet to be defined through procedures before Cantonal and Federal “Commission for the Implementation of Article 143” or courts. Some of the more liquid companies pay small monthly amounts such as KM 40 as compensation to their waitlisted staff, in addition to social insurance contributions. However, many are not paying anything. As a result, many employers’ debt toward social funds and employees continues to accumulate, and the de-facto silent extension of employment for former waitlisted workers in itself creates additional employment obligations. It is unlikely that these additional debts will be paid, given that obligations incurred before 2000 have not been paid either.

However, the implementation of Article 143 has not stopped entirely. Anecdotal evidence from three different companies exemplifies how employers deal with the situation. One company, one of Bosnia’s biggest exporters which is sufficiently liquid, simply paid off its obligations to all waitlisted workers in one go. Another company reached an agreement with their waitlisted workers that they will pay up as soon as the company can afford to pay. This does not give workers strong assurance, and meanwhile, the company has allegedly given regular severance payments priority over Article 143 payments. Yet, another company found a cunning way to resolve the situation once and for all. The manager invited all the waitlisted workers back to work with a very tight deadline of only a few days so that only a small share of them managed to return to work (the rest had meanwhile entered new employment, which, while probably mostly informal, they did not want to leave in order to return to the company).

Ultimately, it appears that the absence of sanctions in the Labor Law for failing to comply with Article 143, as well as the insolvency of most employers, are to be blamed for the slow implementation. Moreover, beyond the initial passing of the 2000 deadline, there has always been an incentive for companies not to comply with Article 143 but rather to wait for a change in the regime or a Government program. For example, in 2002, Sarajevo Canton allocated KM 1m of privatization proceeds to finance severance for waitlisted workers, based on data from the Sarajevo Canton Employment Service database. However, the announcement of the program triggered a massive termination of further waitlisted employees, resulting in new claims beyond what was affordable.

Source: Kadie (2004)

### *Part-time and temporary employment*

127. While the Labor Laws introduced temporary and part-time employment if also stipulated in the collective agreements or company rulebook, neither Entity GCAs contain such provisions. Furthermore, the Laws limit temporary and part-time employment to not more than 60 days within a calendar year, during which time they grant said temporary and part-time employees entitlement to health, pension and disability insurance. However, the legal introduction of temporary and part-time employment appears to have had little effect in the workplace, and such forms of employment are very limited in BH. The Labor Laws in BH, similar to other countries in SEE, also do not provide for and do not regulate temporary work agencies<sup>68</sup>. In addition, in the RS the setting of the minimum wage as a monthly amount effectively works against part-time and temporary employment. The FBH followed the same practice until the recent adoption of the new FBH GCA which introduced, for the first time, an

<sup>68</sup> See Micevska (2004)

hourly minimum wage. While this is expected to help promote part-time and temporary employment, it needs to be complemented by a change to the employee workbook system.

### *Employee Workbook*

128. **The Labor Laws specify the right of an employee to a workbook, which accounts for the employee's pensionable years of service.** The workbook is kept by the employer for the duration of employment and is released to the employee at the time of employment termination duly stamped to indicate the dates of employment. Resting with one employer for the duration of employment, the workbook becomes an obstacle to part-time and multiple or parallel employment. Moreover, according to the GCAs, employment can only be terminated once all outstanding liabilities have been paid to the worker, and only at that time is the workbook released to the worker. This means that a worker is taken hostage by the workbook in a situation where employment has effectively been terminated, but not all outstanding liabilities have been settled, and the worker cannot move on to new employment without the released workbook, such as in the case of "fictitious" workers.

### *Working hours and overtime provisions*

129. **While the Labor Laws provide flexibility on working hours and overtime, the collective agreements are more rigid.** Both Entity Labor Laws introduced maximum weekly working hours of 40 for full-time employment. However, without specifying the terms, the RS GCA mandates the employer to shorten work hours to 10 hours per week for workers with physical and psychological health concerns that are potentially harmful to the said employees' health. Also, while the Laws protect minors, pregnant women, mothers of children younger than 3 years of age, as well as single parent of child of below 6 years, from overtime work, affected individuals are nonetheless allowed to work overtime if they so choose. The RS GCA, however, does not provide for this individual choice, and exempts people with disabilities (disability categories of above 70 percent) from overtime, and sets a limit to overtime of 10 hours. Salary increase for overtime cannot be less than 30 percent of an individual's wage, while RS GCA raises this to 35 percent.

### *Leave and maternity leave provisions*

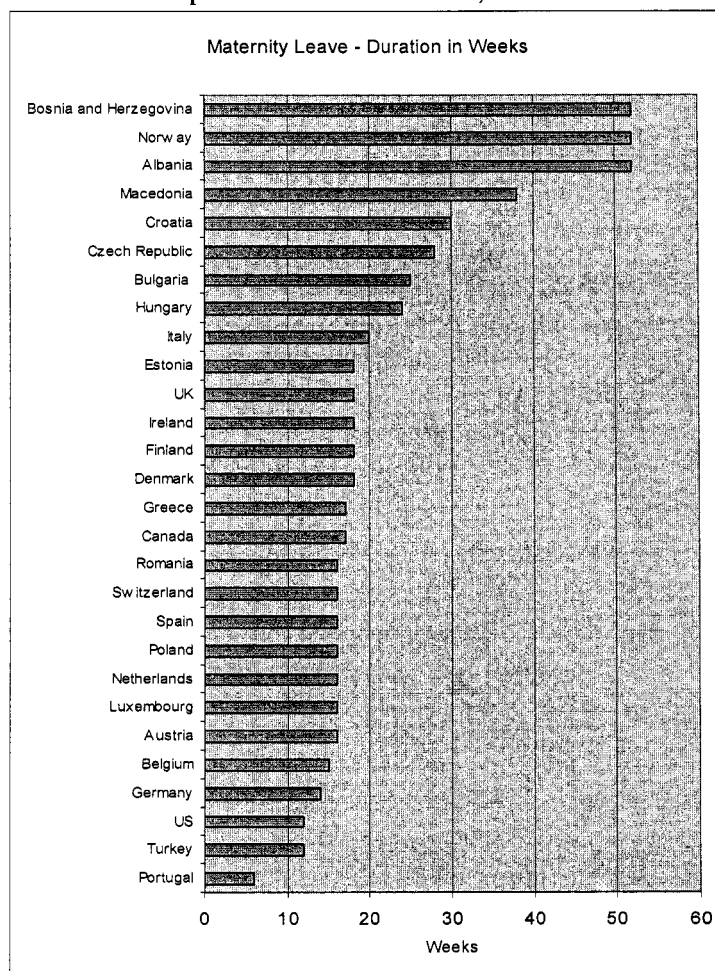
130. **While the Labor Laws contain general provisions on leave entitlements, it is the collective agreements in which these entitlements are spelled out in detail and where additional entitlements are granted.** The Labor Laws specify minimum annual leave duration of 18 days, while under-aged employees are entitled to a minimum of 24 leave days and those working in harmful conditions to 30 days. The Laws also mandate that annual leave be taken in two parts and explicitly prevent the employee from waiving annual leave. The Labor Laws also leave it to collective agreement, company rulebook or individual employment contract to stipulate more generous leave provisions. The GCAs specify the workers entitlement to an annual leave benefit. In the FBH, this entitlement is in the amount of 50 percent of the average wage paid in the company in the previous month, however only in case the company was profitable in the previous year, while in the RS it is three minimum wages paid in the company in the previous month. In addition, the BCAs specify a number of additional paid leave days for marriage, child birth, death of a family member, blood donation and other activities<sup>69</sup>.

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<sup>69</sup> For details, see comparison of general and branch collective agreements in Appendix IV

131. Both Entities provide generously for maternity leave, with mandated benefits being almost twice the commonly found levels in other counties (Figure 3.5). The Labor Laws in both Entities require employers to grant a woman during pregnancy and after childbirth (i.e., for child-rearing) twelve months of leave for each child and thereafter, with reduced hours upon returning to work until the child is two years of age. Like other social welfare and child protection benefits, maternity benefits in the FBH are legislated to be financed by the Cantons. However, not all Cantons have passed the relevant Cantonal legislation, and yet fewer Cantons are actually paying maternity benefits. In fact, Sarajevo Canton is the only Canton paying regular child care and social welfare benefits. Sarajevo Cantonal legislation sets the maternity benefit at 60 percent of the mother's average wage over the previous 6 months. In the RS, maternity leave is twelve months for the first child and eighteen months for each succeeding child. Maternity pay during such leave is at full pay (calculated as the average over six-months prior to giving birth), adjusted monthly for any increase in salaries paid in the RS. The costs are paid by the Public Fund for the Protection of Children, although the employer may bear some costs, too (for example, pay for the first four months of leave). This reimbursement is limited to those companies who have paid the child protection contribution levied on the payroll.

**Figure 3.5 Bosnia and Herzegovina's maternity leave duration stands out in comparison with other European and OECD countries, 1998-2002**



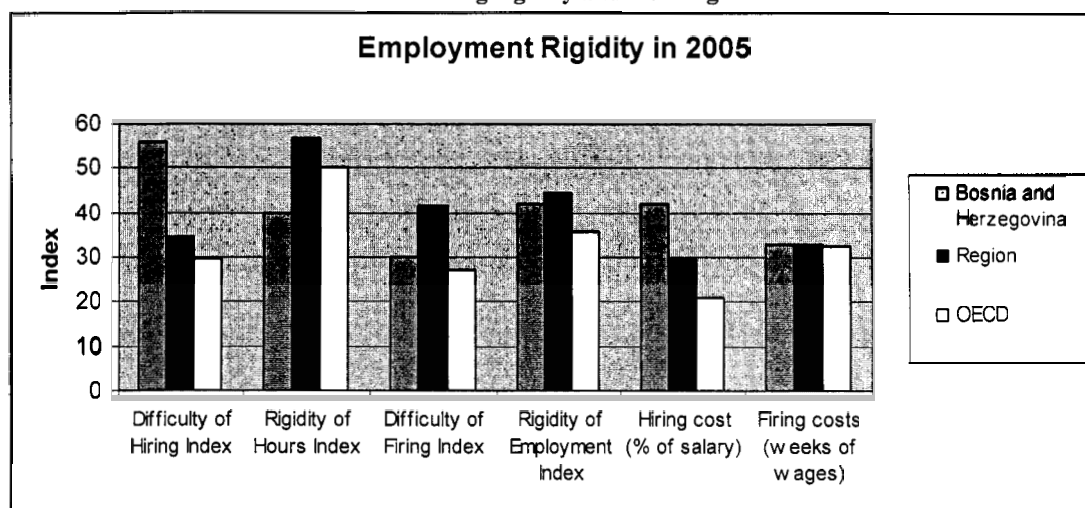
Sources: The Clearinghouse on International Developments in Child, Youth and Family Policies, Columbia University New York, Paci (2002) and RS and FBH Labor Laws



### *Benchmarking Bosnia and Herzegovina's Employment Protection*

132. **Cross-country business environment analysis shows that employers in BH face more rigidity in the hiring than in the firing process in a regional comparison.** Figure 3.6 presents rigidity indices from the 2005/2006 “*Doing Business*” survey for BH as well as averages for transition countries in ECA and for OECD countries. The indices measure how difficult it is to hire a new worker, how rigid the regulations are on working hours, and how difficult it is to dismiss a redundant worker. Conditions covered by the indices include: availability of part-time and fixed-term contracts, working time requirements, minimum wage laws, and minimum conditions of employment. Each index assigns values between 0 and 100, with higher values representing more rigid regulations. The overall Rigidity of Employment Index is an average of the three indices. For BH, the overall index is 42, down from 49 in 2004/2005, compared with the regional average of 44.3 and OECD average of 35.7. Firing costs are calculated on the basis of the number of weeks worth of salary in severance, and notification and penalties that must be paid to dismiss a worker.<sup>70</sup>

**Figure 3.6 BH scores worse than regional comparators on an index of hiring difficulty, but compares better on firing rigidity and working hours**



Source: World Bank (2005), *Doing Business 2006*; Higher numbers indicate greater regulation

133. **The *Doing Business* data reveal that, despite their formal introduction in the Labor Laws, temporary and part-time employment still encounter obstacles in BH.** As Figure 3.6 shows, Bosnia and Herzegovina compares unfavorably to the Europe and Central Asia regional average as well as to the OECD average in terms of difficulty of hiring<sup>71</sup>. The high score on difficulty of hiring is in part driven by the limited availability of term contracts. Analysis in this

<sup>70</sup> World Bank (2005), *Doing Business 2006*

<sup>71</sup> The difficulty of hiring index measures (i) whether term contracts can be used only for temporary tasks; (ii) the maximum duration of term contracts; and (iii) the ratio of the mandated minimum wage (or apprentice wage, if available) to the average value added per worker. A country is assigned a score of 1 if term contracts can be used only for temporary tasks, and a score of 0 if they can be used for any task. A score of 1 is assigned if the maximum duration of term contracts is 3 years or less; 0.5 if it is between 3 and 5 years; and 0 if term contracts can last more than 5 years. Finally, a score of 1 is assigned if the ratio of the minimum wage to the average value added per worker is higher than 0.75; 0.67 for a ratio between 0.50 and 0.75; 0.33 for a ratio between 0.25 and 0.50; and 0 for a ratio less than 0.25 (World Bank (2005), *Doing Business 2006*).

report shows that while the Labor Laws introduce the concept of temporary contracts, their use is limited to 60 days per calendar year. Moreover, the collective agreements remain without any provisions on temporary and part-time employment, and that certain practices (such as the workbook) actively undermine the use of part-time employment.

134. **The evidence on firing difficulty does not mean room for complacency, given that BH's enterprise sector downsizing is still ahead.** The *Doing Business* findings on firing need to be treated with caution. BH's provisions appear to compare favorably with other transition countries, but not with high income OECD countries. Moreover, as discussed earlier in this Chapter, few countries face an overstaffing problem as pressing and overwhelming as BH, evident in the fictitious worker problem. This suggests that the authorities need to carefully look further at possibilities of relaxing the firing regulations so as to facilitate the much needed labor force adjustments in the enterprise sector.

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## D. Regulatory Gaps

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135. While the system of industrial relations in BH covers practically all legal and regulatory aspects of the labor market, there are some areas that are either not well-defined or totally absent. The case of work councils and arbitration has already been mentioned. Below we examine the incomplete representation of social partners in tripartite arrangements, the partial determination of minimum wages in the FBH, the absence of lay off regulations in both Entities, the lack of alternative to the workbooks as well as the lack of measures that would insure employers from certain risks (such as natural disasters or inability of employees to carry on with their duties).

### *The Representativeness of Social Partners and Issues in Collective Bargaining*

136. **The representativeness of the trade unions and employers' associations remains rather undefined.** Labor legislation does not specify nor set out clear regulations on minimum membership and verification criteria of the changing representativeness of social partners.<sup>72</sup> For example, the *de novo* private sector is expanding over time, while recent years have seen the erosion of the representativeness of the central trade union confederations. This report notes that the issue of representativeness is essential for tripartite arrangements and the credibility of collective bargaining. This suggests there is a need for the Government and the ESCs to set minimum representativeness standards over the medium-term, and also to promote consolidation of employers' association and trade union structures. With the situation in a flux, however, this can only happen gradually and without stifling the development of the emerging new employers' association structures.

137. **The Labor Laws do not contain detailed provisions on enterprise-level bargaining between trade unions and employers.** According to the Laws, employers with more than 15 employees have to adopt a company rulebook to regulate salaries, workplace organization and other relevant issues, after mandatory consultation with the trade union(s). Moreover, an employer with more than 15 employees has to consent to the formation of a workers council, if 20 percent (FBH) or 33 percent (RS) of the workforce so demand. Where there is no workers' council, the trade union formation in the company has the rights and obligations of the workers council. According to the FBH Labor Law, the role of the workers' council is advisory in nature, and the council can submit comments and proposals on the company rulebook to the employer.

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<sup>72</sup> The Labor Laws acknowledge a role for arbitration, although this has not yet been implemented.

However, the law does not have detailed provisions on the organization of collective bargaining at the company level. The workers' councils do not fulfill the role of worker representation in bargaining - according to the law, it is the trade union that protects collective and individual rights of employees who are members.

138. **Most of the employers and workers currently engaged in collective bargaining in both Entities are affiliated with the public sector.** Thus, the Government is represented "three times" at the bargaining table - as Government, as employer and as workers. The private sector employers' associations have modestly broadened their base but, as mentioned, earlier representation has been generally low - for example, the Employers Confederation in the RS (ECSR) has only 178 membership fee-paying company members that employ only about 6,000 people. The currently valid GCA in the RS was signed in 1999 by the Chamber of Commerce whose membership is compulsory and thus defies the notion of voluntarism.

### ***Workbooks***

139. **The requirement for employers to retain an employee's workbook until the point of separation creates and reinforces several rigidities in the labor market.** Designed for a labor market characterized by full-time and lifetime employment, the current workbook practice - which tracks in hard copy the employee's employment history for social insurance purposes - has been proven to be a major *de facto* barrier to formal alternative forms of employment including part-time and temporary work and secondary employment. Under the current system, the employer is required to retain the employee's workbook until the employment relationship ceases, at which time he has to return it to the employee duly stamped. This practice of workbooks has contributed to the emergence of the "fictitious worker" problem - when employers cannot meet their obligations with respect to current wages, social insurance dues or severance payments, the workers naturally stop working for such employers. At the same time, since these employers are also not in a position to meet their obligations and stamp the workbook, arrears start accumulating, thus creating a vicious cycle and increasing the inability of employers to settle. Alternative administrative arrangements for maintaining the social insurance records of workers urgently need to be explored and introduced. Reform measures over the medium term may involve the introduction of an integrated electronic employee registration database. However, in the short term, procedures could be amended to enable employees to withdraw workbooks, while retaining their claims on unpaid wages and social insurance contributions.

### ***Natural Disasters and Disability***

140. **Labor legislation stipulates that employers are expected to continue meeting their financial obligations even when activities cease because of a natural disaster.** While this provides protection for workers, it fails to ensure the employer's ability to continue its operations and eventually, in the case of closure, both the employer and the workers lose out. There can be mechanisms to insure employers against such events and there is no reason why private markets cannot play a substantial role in this. But the social partners, to the extent that they feel such a need, can identify possibilities for insuring against such events. Another area of concern is the obligation of employers to continue employing a worker who is unable to perform his/her duties but who has been awarded an unfavorable decision to receive social insurance benefits. This problem relates to the way the authorities enforce the relevant regulations, but the fact still remains that it is an issue that should be addressed for the benefit of both workers with disability and their employers.



## *Layoffs*

141. **BH suffers from a pronounced case of overstaffing and a country-specific “fictitious” worker problem.** The grave consequences of the creation of waitlisted workers are widely acknowledged. The phenomenon arose because apparently neither Labor Law contemplates that an employee for whom there is no current work should be terminated. Absent termination, the employee for whom there is no work remains an employee of that employer, even though he or she is not being paid. Employees in this situation seek work in the informal labor market while remaining in the singular employment relationship contemplated by the law, but neither that employer nor the informal employer pay any payroll taxes. This untenable situation is driven by a conjunction of the abstract nature of the law with the employee’s desire eventually to secure additional social insurance contributions or a significant severance sum.

142. **The labor legislation in both Entities is without any provisions for temporary layoffs which could help prevent a fictitious worker problem in the future.** The Labor Laws should be brought into conformity with common practices. Typically, employers can adjust to economic downturns by means other than outright termination or collective dismissal. However, in lieu of collective discharge as a response to economic conditions, employers in many industrial relations systems can resort to temporary layoffs. This is not a current option under the law in either the FBH or the RS, though in the past (under Yugoslav law) this was possible under certain conditions and usually for a limited layoff period.

143. **A layoff can apply to an employee whose services are not currently required but might be needed in the future.** He/she, therefore, remains subject to recall upon a business upturn. The laid off employee is free to work elsewhere while waiting to be recalled by the original (“primary”) employer. While on layoff status, relevant payroll contributions are made by the secondary employer. Recall rights of the workers and obligations of the primary employers can be regulated by the law or collective agreements (for example, with respect to duration, type of job on reassignment and so on).

144. **This report recommends exploring the introduction of legislation that would enable an employee to be placed on “layoff” status.** This will no longer prohibit that employee from seeking lawful employment with another employer, while remaining subject to recall once the primary employer’s business needs allow it to expand. A recalled employee would have no break in service for the period of layoff for the purpose of the accumulation of seniority or benefits as the current, secondary employer would be required to pay all applicable payroll taxes for the worker.

### Box 3.6: International Experience on Temporary Layoffs

Temporary layoffs (TLOs) aim to reduce or even avoid permanent redundancies and help companies adjust their work force to cyclical downturns and economic shocks. They are not a tool to facilitate permanent downsizing. TLOs have been common in the United States and Canada but are also found in various forms in Europe (such as in Scandinavia, Austria, Spain and Greece) and elsewhere (for example, Australia and Singapore). Usually, the labor laws prescribe only the general conditions for TLOs, and their specifics are found in collective agreements. TLO provisions may include the categories of workers subject to layoff and prescribe criteria for selecting workers, the maximum period of layoff status and any compensation paid to the worker during this period, priority rules for recalling different types of workers, notification periods and dismissal procedures. Companies may deviate from the norms suggested by the labor law if these deviations are agreed with the trade-unions.

Other requirements (for example, whether the workers should actively seek employment during the layoff period or can just wait for the recall) vary by countries and usually depend on the availability of unemployment and other social benefits. Similarly, the statistical treatment of workers on layoff varies by country. For example, persons on temporary layoff are counted as unemployed in the United States and Canada, with no requirement that the person conduct a job search. In the EU, persons on temporary layoff either must be classified as *employed* (if they have a strong attachment to their job) or must be actively seeking work in order to be counted as *unemployed*. Alternatively, if not seeking work, they are counted as *inactive* (out of the labor force).

TLO systems can enhance the worker-to-firm attachment especially in sectors of the economy that exhibit cyclical and especially seasonal fluctuations (e.g. construction or tourism). In some countries around one-third of all laid off workers return to the dismissing employer. In the US as many as 70 percent of laid-off workers who initially believed that they will be recalled ended up returning to their previous employer. In Sweden, one study found that about half of all transitions from unemployment were to the previous employers, which implies that about 10% of all the unemployed were waiting to be rehired. Similarly, in the US about 15 percent of the unemployed are workers on temporary layoffs.

An important aspect of the usage of TLOs is whether firms use them to benefit from the unemployment insurance (UI) system. In theory, unemployment benefits may increase the incidence of temporary layoffs, in that, when deciding about temporary layoffs, employers do take into account the availability of unemployment insurance. In fact, many US studies attribute as much as 30 percent of temporary layoff spells to unemployment benefit availability. However, evidence from Sweden shows that firms tend to recall workers ahead of the unemployment benefit exhaustion. A factor that can mitigate the negative interaction between unemployment insurance and layoffs is the willingness of the firms to try to preserve the employment relation with their workers in the presence of adjustment costs and concerns about reputation. Adjustment costs arise because labor is not a fully variable factor of production, and therefore firms find it difficult to partially reorganize work assignments when employment changes or find it expensive to hire new workers with firm-specific skills when business opportunities expand.

In assessing the usefulness of TLOs in a country context, economic theory needs to be complemented by careful empirical evaluations of the effects of temporary layoffs against the objectives of regulations (efficacy) and alternatives (efficiency). For example, effects can vary by the *workers' age* (younger workers may be recalled sooner than older workers), *education* (the less educated may face fewer opportunities and rely more on recalls), *firm specific seniority and length of service* (tenure), *gender and other characteristics of workers* (e.g. marital status and presence of young children), *the way unemployment insurance is financed* (through payroll contributions or general taxes), *sector of employment* (e.g. workers in the construction industry may have higher probability of both being laid off and recalled while manufacturing may have a higher recall rate than the services sector), *size and type of enterprises* (e.g. private firms may use layoffs less than state firms) and *location* (e.g. high local unemployment rates or residence in a big city often prolong unemployment).

In short, the use of TLOs needs to be examined carefully in BH – also in relation to other measures. It is important to note that, still facing major labor adjustment needs in the State-owned and mass-privatized sector, BH needs to find ways to facilitate permanent lay-off. By definition, TLOs are not an adequate tool to deliver these permanent adjustments. However, once this adjustment has taken place, TLOs can help competitive companies deal with cyclical downturns and shocks.

Sources: See Alba-Ramirez and Munoz-Bullon (2004) for Spain, Fischer and Pichelmann (1991) for Austria, Mavromaras and Rudolph (1998) for Germany, Robertson (1989) for Canada, and Jansson (2002) and Nivorozhkin (2005) for Sweden. For the US see: Feldstein (1976, 1978), Topel (1983), Katz (1986), Katz and Meyer (1990), Card and Levine (1994), Anderson and Meyer (1994), Lazear (2003). For more general issues see Karni (1996), Idson and Valletta (1996), Carson (2001), Vodopivec et al. (2002), Holmlund and Storrie (2002), Roed and Nordberg (2003), Mavromaras and Orme (2004), and Rodriguez-Planas (2004).

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## D. Directions for Industrial Relations Reforms

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145. In this final section, we provide an assessment of the regulatory and broader industrial relations framework in BH in view of the international evidence presented in Annex V of this report.

### *Should the industrial relations in BH become more flexible?*

146. **On one hand, the system of industrial relations appears to be flexible.** The Labor Laws prescribe only minimal provisions that can be used for subsequent arrangements to be agreed between employers and workers. Being voluntarily agreed, these agreements should reflect the positions of the contracting parties. This is in theory. But also in practice for the period covered by the current and other recent studies, most of the empirical analysis at the economy-wide level is consistent with this view. On aggregate, there is little (consistent) evidence to suggest that the labor market is choked by regulatory provisions. First, BH is nowhere near a “jobless growth path”, as the employment/output elasticity is near unity rather than zero.<sup>73</sup> Second, despite the relatively stagnant overall size of the formal sector, there has been significant job creation in the formal sector (of the order of 23 percent since 2001) outside the ailing SOE sector, alongside an increase in informal sector employment. Third, the spectacular increase in the labor force participation rate was translated in employment gains while unemployment remained constant – admittedly at a high level. Fourth, wage determination was statistically found to be subjected to few systematic factors that could be linked to collective bargaining and, when they did so, the link was rather weak. For example, the wage increments due to additional education or longer tenure are just what they should be (i.e. positively correlated) but not more than that. The increments are nowhere near what one would expect from the provisions of collective agreements.

147. **On the other hand, there are remaining constraints to employment adjustment and wage rigidity in certain sectors, but this has more to do with the history of transition, public sector policies and political/economic considerations rather than the industrial relations system.** In terms of employment, although the SOEs lost one third of their employed workforce since 2001, more remains to be done, possibly as much as another 35-40 percent reduction to bring the current employment of 220,000 closer to 150,000. In the meantime the issue of waitlisted and fictitious workers remains unresolved, while the number of the latter is probably still increasing. Wages appear to be rather uniformly determined in the public sector but not in the private or the informal sector. As the Table 3.2 below shows, real wage increases in the public sector are high and take place within a narrow band in both Entities and for both female and male employees. These observations have little to do with whether collective bargaining takes place at the economy-wide, branch or company level or many other aspects of industrial relations. They relate to: (a) historical obligations of the Government that the Government can no longer meet; and (b) current pay awards as determined by the Government (as Government and also as an employer) and public sector trade unions. The obvious approach here is for the Government and workers in the public sector to work out a feasible but also fair solution for the current deadlock, and set the future of the public sector on a sustainable basis.

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<sup>73</sup> The employment/output elasticity is usually significantly less than one and, in the case of jobless growth, zero. A typical value of the elasticity is around 0.3 to 0.6 with probably a value 0.4 being a representative one under normal conditions in the longer run. It is less than one for reasons of higher use of capital in production over time, rising productivity, and more effective use of labor arising from better management techniques or simply economic pressure from increasing competition.

**Table 3.2: Annual Growth Rates (%) of Real Average Wages, 2001-2003**

Sector	Male		Female		Average	St. Dev.
	FBH	RS	FBH	RS		
Public	8	6	10	15	9.6	3.7
Private	3	-9	18	-12	-0.2	13.8
Informal	13	2	-5	-1	2.4	7.6

\*Employees with positive earnings;

\*\* The average and standard deviation are calculated across the rows

Source: Own calculations from LSMS, Appendix Table A3.x

148. **However, the industrial relations system can become more flexible by introducing legislation on layoffs, changing some provisions in collective agreements and separating public from private wage determination.** This report identified as a major omission in the current system *the lack of legislation for lay offs*. It also argues that there is a need for and sound reasons why *public sector wage determination should be separated from that in the private sector*. It finally identified a series of issues that can be usefully addressed to reduce rigidities or enhance the functioning of the labor market. These include the *determination of minimum wages* as well as the introduction of *a separate minimum wage for younger workers*; the usefulness of a mechanism for insuring employers from stoppages or closure of operations when no fault is involved (such as *force majeure*); the need to bypass *workbooks* as a major determinant of when employment ceased; and the system of coefficients that mechanically link wages to the education or tenure of workers that is no longer appropriate for a market economy.

***Should the industrial relations system become less centralized?***

149. **On paper, the industrial relations system appears to be centralized, but in practice it is decentralized and in a state of flux.** In theory, industrial relations in BH are centralized with cascading provisions from the Labor Laws to GCAs and BCAs and, ultimately, company rule books and individual contracts. But in practice this hierarchy is observed only in the public sector and at times probably selectively<sup>74</sup>. This fluidity is further exacerbated by the fact that labor legislation in neither Entity sets out clear minimum membership criteria and verification procedures for the representativeness of the social partners in collective bargaining. The Government in the negotiation process is represented (rightly) as Government, but also as a principal employer (in the public sector), and a dominant representative of workers (the public sector still employs almost two-thirds of the formal labor force). Yet most of the private sector has not been party to wage-setting branch collective agreements. In practice, in the absence of binding collective agreements for most of the labor market, wages and working conditions tend to be set by the employer in its rulebook or in individual contracts. These provisions and the lack of clarity for collective dispute resolutions, arbitration, and criteria for representativeness of the social partners have resulted in collective bargaining that is partial in its coverage and its effects.

150. **Still, an important lesson from the empirical literature is that centralization is probably less important for labor market outcomes than it is for labor market coordination.** The international evidence shows that the important determinant of good labor market outcomes is whether the industrial relations system is *coordinated* or not. This has to do more with *what the system does* than how the system is *structured* (in terms of union membership or the level at which collective bargaining takes places – such as national, regional, local levels or branch and company levels). For example, a desirable feature of any system is to generate aggregate wage increases that are in line with inflation and productivity changes as well as the international

<sup>74</sup> For example, around 40 percent of public sector workers in both Entities report that their actual wages are different than their usual wages (Table 2.8).

competitiveness of the economy (for example, through changes in the exchange rate). It is precisely at this point where theory is ambiguous and the empirical evidence tends to be dependent on country evidence and the time of the inquiry (See Annex 1 of this report).

151. **Although collective bargaining is often seen as the main cause of high wage increases or persistent unemployment, the evidence on this link is rather inconclusive.** The economic analysis of collective bargaining separates macro and micro effects. In some cases the empirical analysis suggests that there might not even be an effect. Annex 1 of this report explains these issues in more detail. There are sound arguments and often empirical evidence confirming that coordination through pure market mechanisms can lead to good economic outcomes – and this refers primarily to bargaining at company level. However, there are also arguments and some other empirical evidence suggesting that firm-level bargaining can provide workers with an instrument to extract firm-specific quasi-rents or can impose other forms of externalities (see table below).<sup>75</sup>

**Table 3.3: Six externalities of Decentralized Wage Setting**

The input price externality	Decentralized wage gains are passed on as higher product prices, thus increasing the real cost of inputs for other firms.
The fiscal externality	Decentralized wage gains lead to unemployment. The cost in terms of unemployment benefits is born by all tax-payers, not only those involved in wage setting.
The unemployment externality	Decentralized wage gains increase overall unemployment, making it more difficult for all unemployed workers to find a new job.
The envy externality	Decentralized wage gains create envy among other workers.
The consumer price externality	Decentralized wage gains are passed on as higher product prices, thus lowering the real wage of all workers.
Efficiency wage externality	At the decentralized level, firms have an incentive to try to increase the relative wage of their workers to increase their motivation.

Source: Calmfors (1993): pp. 5-6

152. **Still, as a theoretical proposition, delegation of collective bargaining to lower levels (e.g. firm-level) is expected to increase allocative efficiency.** This refers to the microeconomic effects of collective bargaining but is not always confirmed in practice. In fact one of the more fragile arrangements (in terms of economic effects) is multi-unionism at company level. Furthermore, even if delegation of collective agreements to lower levels is found to increase allocative efficiency, this does not indicate whether the level of output would be higher. This would depend on the cost and mix of inputs (technical efficiency) and the boundaries between sectors that are often poorly defined. Another way to restate this issue is by observing that larger firms are more likely to develop formal firm-level bargaining but firm size appears to increase the ability of workers to increase wages.

153. **In conclusion, this report has three sets of recommendations. First, even within the existing system, there is a need for change,** for example to: (a) define the criteria for representativeness of social partners involved in bargaining; (b) limit collective agreement coverage to those enterprises that are represented in bargaining; and (c) separate wage determination between the public and private sectors though avoiding duality between the two labor markets. These changes would be necessary even if the present system is fundamentally amended.

154. **Second, if the system is to change, it will be critical to ensure coordination of collective bargaining at the macro level so that aggregate wage changes are in tune with**

<sup>75</sup> For example, the existence of formal bargaining at the firm level has been found to increase average wages in France (Kramarz et al., 1994).

**inflation, productivity, the competitiveness of the economy and the level of unemployment.** What this requires is, (a) that at the general level, the Labor Laws continue to prescribe the minimum provisions under which labor is priced and allocated in the economy, and (b) at the company level, there is sufficient flexibility for individual contracting (for example, the mandatory portability of seniority pay or the automatic wage increases due to educational credentials should have little role). The critical issue then becomes how to define the space between the labor law and individual contracts. Most countries have some provisions for filling this gap – simply for practical reasons, for example, changes in the labor law are typically much more laborious and time consuming than changes in general or branch or regional collective agreements.

155. **So long as there is sufficient flexibility for individual contracting at the company level, a policy decision in the current context of industrial relations in BH would evolve around the relative balance of the GCA and BCAs.** In this respect, some observations are relevant. For example, the GCA includes sweeping provisions across the labor market and, when the bargaining process at the general level breaks down, it can provoke a generalized dispute across the whole labor market. On the other hand, the BCAs may be more in line with the conditions in the individual sectors, although historically their provisions have been more generous than those in the GCA and the extent of homogeneity of the sectors in times of economic transition is questionable. Although any recommendations have been put forward in this report, the fundamental issue of the balance between GCA and BCAs cannot be answered with certainty given the paucity of data. However, Bosnia and Herzegovina's economic transition with substantial enterprise sector adjustment needs suggests that the tripartite parties be best served by allowing for more rather than less flexibility in the labor market to promote better outcomes.

156. **Third, the report recommends that the agreement on a future framework for collective bargaining be reached through a tripartite dialogue and based on more accurate data and careful economic analysis of the implications of legal and broader policy options.** A move from or to GCAs to or from BCAs or company-based agreements should be pursued on the basis of collating quality data, identifying relevant national and international experience, building analytical capacity and continuing social dialogue under the social-economic councils.

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## E. Improve the Statistical Basis for Labor Market Analysis

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157. **BH lacks the information basis for an objective assessment of the characteristics and trends of the labor market.** As evidenced in the analysis presented in this report, the administrative data collected by the Statistical Offices are partial in coverage and often inaccurate. The offices themselves do not have the capacity to clean up the data or to follow up with the respondents. In addition, the two Entities often apply different methodologies and use terms in different ways. This prevents the emergence of a clear picture both at Entity and State levels. Similarly, the recently introduced LSMS have been designed primarily for poverty analysis but fall short in the terms of reliability and clarity for labor issues. Effectively, the country lacks an information system that would create an enabling environment for an objective understanding of the labor market (necessary for building social consensus) and for the monitoring of various policies and reforms (necessary for the evaluation of competing options). The design of policies can, of course, follow some established principles even without any

reference to facts. For example, measures that increase competitiveness or establish a minimum acceptable welfare level on the social front can go ahead subject to the overall economic constraints. However, more informed approaches, such as those based on reliable statistics and good analyses, can facilitate the process of choosing between competing policy alternatives. By knowing the effects of different scenarios in advance, one can deflate ideological or rent-seeking opposition to otherwise desirable reforms and can anticipate and prepare for the adverse distributional effects of certain reforms.

158. **Therefore, this report supports the decision to introduce an annual Labor Force Survey and recommends working on further increasing the capacity of the Statistical Offices on labor market statistics.** Improvements in the enterprise databases and establishment surveys as well as the introduction of a census will also contribute to the creation of a more accurate statistical picture of the economy. The need for relevant, adequate, and timely statistics is particularly true in the area of labor markets where policies and reforms typically involve winners and losers. The diverse fate of these two groups can be particularly acute in the short run though adverse distributional effects of reforms can be neutralized, and in fact be reversed, in the long run. Thus an adequate statistical system is a prerequisite for the informed and timely design, implementation and monitoring of labor policies. This can avoid deadlocks in the dialogue (as is currently the situation in BH in certain areas) and even industrial conflict.





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# APPENDIX I: DESCRIPTION OF THE LSMS AND VARIABLES

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## **Survey description**

The Living Standards Measurement Survey collects data from a random sample of households from 25 municipalities (out of 145) in Bosnia-Herzegovina of which 14 are from the Federation Bosnia and Herzegovina (FBH) and 11 from the Republika Srpska (RS). Individual observations are subsequently weighted to provide representative estimates separately for each Entity and then for the State at large. A commendable feature of the survey is that it is available on the web – thus accessible to outside users<sup>76</sup>.

The first Living Standards Measurement Survey (LSMS) was conducted in September and October 2001. The main goal of the LSMS is to measure welfare in both monetary and non-monetary terms in Bosnia-Herzegovina.

In addition to data consumption, several other modules cover areas such as education, health and labor markets.<sup>77</sup> The labor markets module covers six areas: Employment Status; Main Job, Second Job, Information about persons who do not work; Information about persons looking for a job; and Status with the Employment Bureau.

This report is based on panel data from Waves 1, 2 and 3 undertaken in 2001, 2002 and 2003. The panel survey sample is made up of over 3,000 households drawn from the LSMS conducted in 2001. Approximately half the households interviewed on the LSMS were selected and carried forward into the panel survey. The households were re-interviewed for a second time in 2002 and again in September 2003.

## **Methodology**

A panel was constructed using years 2001, 2002 and 2003. Every person was assigned a unique ID number<sup>78</sup>. The matching of individuals was based on the identification number (Actpsid), gender and birth date. The universe is all persons older than 15 years old.

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<sup>76</sup> Republika Srpska Institute for Statistics website: <http://www.rzs.rs.ba/AnketeZuBHENG.htm>, Federation of Bosnia-Herzegovina's Federal Office of Statistics website: [http://www.fzs.ba/download\\_eng.htm](http://www.fzs.ba/download_eng.htm)

<sup>77</sup> The questionnaire consists of 13 modules covering Roster, Housing, Education, Labor, Migration, Health, Voucher, Credit, Social Assistance, Consumption, Non-Agricultural Activities and Agricultural Activities.

<sup>78</sup> The ID number is constructed by combining five variables: Municipality code, Group of Enumeration Areas, Enumeration Area or PSU, Household number in enumeration area, and Personal identification number.

There were 6,311 respondents interviewed in all three years of the survey: 2,837 in RS and 3,474 in FBH. This represents around 81.2% of the responding wave 1 sample, a retention rate which is high compared to many other panels around the world.

### **Description of Variables**

**Employment:** A person is classified as employed if he/she is 15 years or older and the employment status of this person is non-missing. There are some workers who are classified as “employed” but did not work in the reference week. These might be (i) workers on the “waiting list” (forced administrative leave), (ii) workers who do not work because of war and other difficulties, and (iii) workers not working because the employer is in the process of bankruptcy or liquidation. Also, some workers might not be classified as employed in the cases that they did not have an agreed date for return to work, may have been in this status for a long time, and may not have received wages during the waiting period.

**Formality-Informality:** This is a constructed variable along the lines of the WB Labor Market Study 2002.<sup>79</sup> *Formality* refers to employees who work in (a) public enterprises, institutions, or organizations, (b) private sector and pension contributions are paid and (c) international organizations. *Informality* refers to (a) private sector employees for whom pension contributions are not paid; (b) workers who are unpaid family member, farmer on own farm, or do some other activity such as sale of agricultural and other products or provide housing, intellectual or other services.

**Unemployment:** A person is classified as unemployed if he/she is (a) in the working age population (15-64) but not employed as defined above *and* (b) seeking work in the last 4 weeks *and* (c) available for work during the reference week. This accords the ILO definition but could not be applied to the Wave 3 questionnaire because of routing problems.<sup>80</sup> However, self-reported unemployment can be calculated for each wave.

**Discouraged workers:** If a worker is thus classified if he/she was not looking for a job in the last 4 weeks, but wanted to work, believed that there was no suitable job available and was available to work. Again, it is not possible to classify individuals as “discouraged” for Wave 3.

**Education:** This question is asked only in the first survey in 2001 and this information was used to infer the education level of individuals who were present in all panels.

**Industry:** Thirteen industries are identified: Agriculture and Fishing; Mining, Manufacturing, Utility, Construction, Trade, Hotels and Restaurants, Transport, Storage and Communication, FIRE (Finance, Insurance and Real Estate), Public Administration, Education, Health and “Others”.

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<sup>79</sup> According to the “The resolution concerning statistics of employment in the informal sector” (The Fifteenth International Conference of Labor Statisticians, January 1993) the defining element of informal employment is the fact that the employer is not an incorporated business. That is, a worker is treated as informally employed if he (she) is either self-employed (in an unincorporated business), or an employee working for unincorporated employer. Note that by its nature, informal jobs are associated with different bearing of risks and profits, and their job is directly affected by their business performance; employees in the informal sector are usually more exposed to risk, because the risk of their job termination is higher—they enjoy less protection. Note that formal sector workers may or may not be covered by health and pension insurance.

<sup>80</sup> UK Department of International Development Report, 2004, page 34.

Sector: Three sectors are distinguished Public, Private and Others other/ farm/ unpaid/ international).<sup>81</sup> Workers were assigned to the Public Sector if they replied they worked in a public enterprise, institution or organization. The Private Sector in our sample consists of workers in the private formal sector.

Firm Size: In 2002, 2003 this question is a continuous variable. For 2001 a new variable was created for the following ranges: 1-10, 11-100, 101-500, 501+

Tenure: Years with current employer

Waiting List: Individuals who did not work during the reference week because they were in the waiting list.

Wages: Individuals report usual wages and last paid wages (the question was "What is the amount of your usual monthly NET salary or earning at your main job?"). Previous reports based the analyses on usual wages and we follow the same procedure. These are real wages, that is wages adjusted by inflation using the IMF CPI indices for RS and the Federation (taking 2001 as base year).

Working Age Population: Those in the 15-64 age group

Labor Force Participation: The employed and unemployed as a share of the working age population.

Employment rate: The employed as a share of the working age population

Unemployment rate: The unemployed as a share of the of the labor force (employed and unemployed)

### **Earning Functions**

Results based on those reporting positive monthly earnings within the range of 40KM to 4,000KM.

Workers of international organizations are excluded.

The regressions are restricted to employees only aged 25-55.

Vocational: Dummy variable with value of 1 when someone has vocational education, 0 otherwise. . These individuals are also assigned the number of years of schooling completed under the education variable. Of those who attended vocational education, 92% have completed secondary education and 8% have completed primary. So, the coefficient of vocational captures the effect of education type, not quantity.

Firm size. Three different versions were tried. The first used the grouping adopted in the World Bank (2005) whereby a company was given the value from 1 to 6 depending on which bracket (1-10, 11-20, 21-50, 51-100, 101-200, 201-500, and 501+) its number of employees fell. The

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<sup>81</sup> Note: World Bank (2002) includes international organization as 10 -in the public sector. World Bank (2005) added the international organization to the "Others" category. Unless noted, we will use Bisogno-Fares definition for consistency in the comparisons in this report.

second utilized a continuous variable as company size was originally reported in the survey. The third was constructed from the mid-point values of the following ranges: 1-10, 11-20, 21-50, 51-100, 101-200, 201-500, and 501+. All three specifications of this variable returned mainly insignificant results with the second version returning a occasionally a marginally significant coefficient for men in the Federation.

Tenure is a continuous variable (in years) related to the length of employment with the current employer.

Industry was specified as 0-1 dummies for the following 13 industries: Agriculture and Fishing; Mining, Manufacturing, Utility, Construction, Trade, Hotels and Restaurants, Transport, Storage and Communication, FIRE (Finance, Insurance, Real Estate), Public Administration, Education, Health, and Others.



# APPENDIX II: TABLES

**Appendix Table A1.1**  
Formal Employment 1991-2004

	1991	1997	1998	1999	2000	2001	2002	2003	2004
<b>A. Bosnia and Herzegovina</b>									
Total	975	575	639	629	638	627	629	626	622
Agriculture	36	n.a.	n.a.	21	20	21	21	20	19
Manufacturing	498	n.a.	n.a.	257	256	248	244	234	226
Services	441	n.a.	n.a.	351	362	359	364	371	377
<b>B. FBH</b>									
Total	638	373	395	408	411	407	394	387	385
Agriculture	21	n.a.	10	10	10	11	11	10	10
Manufacturing	325	n.a.	161	161	162	156	152	146	143
Services	292	n.a.	224	237	239	240	232	231	232
<b>C. RS</b>									
Total	337	202	244	221	227	220	235	238	237
Agriculture	15	n.a.	n.a.	11	10	10	10	10	9
Manufacturing	173	n.a.	n.a.	96	94	92	92	88	83
Services	149	n.a.	n.a.	114	123	119	133	140	145

Sources: Entity Statistical Offices

**Appendix Table A1.2**  
**Employment, Unemployment, and Labor Force Participation, by entity, 2001-2002-2003**

Number of Observations in LSMS	2001			2002			2003		
	BH	FBH	RS	BH	FBH	RS	BH	FBH	RS
<b>A. Employment</b>									
(i) Total	2,582	1,266	1,316	2,725	1,355	1,370	2,785	1,443	1,342
Men	1,707	841	866	1,781	938	843	1,788	955	833
Women	875	425	450	944	417	527	997	488	509
Employment Rate- total	40.2	35.1	46.8	42.4	37.5	48.7	43.4	40.0	47.7
Men	53.7	48.1	60.6	56.0	53.6	59.0	56.3	54.6	58.3
Women	27.0	22.8	32.5	29.1	22.4	38.1	30.7	26.2	36.8
(ii) Formal Employment- total	1,696	861	835	1,757	926	831	1,781	967	814
Men	1,118	578	540	1,146	332	526	1,158	647	511
Women	578	283	295	611	306	305	623	320	303
Formal Employment- rate	65.7	68.0	63.4	64.5	68.3	60.7	63.9	67.0	60.7
Men	65.5	68.7	62.4	64.3	35.4	62.4	64.8	67.7	61.3
Women	66.1	66.6	65.6	64.7	73.4	57.9	62.5	65.6	59.5
(iii) Informal employment- total	887	406	481	989	445	544	1,006	477	529
Men	590	264	326	654	620	322	632	309	323
Women	297	142	155	335	113	222	374	168	206
Informal employment- rate	34.4	32.1	36.6	36.3	32.8	39.7	36.1	33.1	39.4
Men	34.6	31.4	37.6	36.7	66.1	38.2	35.3	32.4	38.8
Women	33.9	33.4	34.4	35.5	27.1	42.1	37.5	34.4	40.5
<b>B. Unemployment</b>									
Total	488	257	231	739	374	365			
Men	305	158	147	429	201	228			
Women	183	99	84	310	173	137			
Unemployment rate- total	15.9	16.9	14.9	21.4	21.7	21.1			
Men	15.2	15.8	14.5	19.5	17.7	21.4			

Women	17.3	18.9	15.7	24.9	29.4	20.8			
B'. Self reported Unemployment									
Total	1,252	694	558	1,233	670	563	1,218	653	565
Men	760	451	309	683	345	338	707	356	351
Women	492	243	249	550	325	225	511	297	214
Self-reported Unemployment rate	32.7	35.4	29.8	31.2	33.1	29.1	30.4	31.2	29.6
Men	30.8	34.9	26.3	27.7	26.9	28.6	28.3	27.2	29.7
Women	36.0	36.4	35.6	36.8	43.8	29.9	33.9	37.8	29.6
C. Activity Rates									
Labor Force Participation-total	3,070	1,523	1,547	3,451	1,724	1,727			
Men	2,012	999	1,013	2,204	1,136	1,068			
Women	1,058	524	534	1,247	588	659			
Labor Force Participation-rate	47.8	42.2	55.0	53.7	47.8	61.4			
Men	63.3	57.1	70.9	69.4	65.0	74.7			
Women	32.6	28.2	38.6	38.4	31.6	47.6			
other Labor Force Participation (employed + self reported unemployed)	3,834	1,960	1,874	3,958	2,025	1,933	4,003	2,096	1,907
Men	2,467	1,292	1,175	2,464	1,283	1,181	2,495	1,311	1,184
Women	1,367	668	699	1,494	742	752	1,508	785	723
other Labor Force Participation (employed + self reported unemployed)	59.7	54.3	66.6	61.6	56.1	68.7	62.3	58.1	67.8
Men	77.6	73.9	82.2	77.5	73.4	82.7	78.5	75.0	82.9
Women	42.1	35.9	50.5	46.0	39.9	54.3	46.5	42.2	52.2
Memorandum Item	82	83	81						
Working age population (15-64) -total	6,424	3,610	2,814						
Men	3,178	1,749	1,429						
Women	3,246	1,861	1,385						

**Appendix Table A1.3**  
**Average monthly earnings in KM and relatively to Entity Average, 2000-2004**

	FBH					RS				
	00	01	02	03	04	00	01	02	03	04
In KM										
<b>Total</b>	<b>413</b>	<b>443</b>	<b>483</b>	<b>524</b>	<b>534</b>			<b>347</b>	<b>379</b>	<b>422</b>
Agriculture	414	404	453	518	515			318	338	371
Mining	380	342	395	445	433			210	245	332
Manufacturing	302	316	360	409	412			235	259	303
Electricity, gas and water supply	525	707	717	676	719			490	516	550
Construction	311	322	356	359	359			264	290	342
Trade	344	319	342	395	389			267	288	304
Catering	316	317	340	394	390			209	216	262
Transport and communications	478	601	629	685	697			461	521	567
Financial Services	816	880	973	1037	1092			543	710	865
Business Services	407	450	497	530	514			424	461	438
Public administration	539	599	646	694	680			565	591	658
Education	433	445	476	505	534			342	352	389
Health and social welfare	446	463	525	594	638			392	424	452
Other services	420	443	493	539	559			304	336	387
Relative to Entity Average (%)										
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Agriculture	100	91	94	99	97	95	84	92	89	88
Mining	92	77	82	85	81	85	84	60	65	79
Manufacturing	73	71	74	78	77	70	68	68	68	72
Electricity, gas and water supply	127	159	148	129	135	141	138	141	136	130
Construction	75	73	74	69	67	81	70	76	76	81
Trade	83	72	71	75	73	80	78	77	76	72
Catering	77	71	70	75	73	69	65	60	57	62
Transport and communications	116	136	130	131	131	118	128	133	137	134
Financial Services	198	199	202	198	205	176	154	157	188	205
Business Services	99	102	103	101	96	123	119	122	122	104
Public administration	131	135	134	132	127	146	157	163	156	156
Education	105	100	99	96	100	118	104	99	93	92
Health and social welfare	108	105	109	113	120	125	124	113	112	107
Other services	102	100	102	103	105	100	95	88	89	92

Correlation of changes for the last three years when information exists: 0.26

Source: Statistical offices

**Appendix Table A1.4**  
Percentage change in industrial earnings  
Last three\* years

	<b>FBH</b>	<b>RS</b>
Financial Services	18%	59%
Mining	30%	58%
Construction	11%	30%
Manufacturing	29%	29%
Other services	22%	27%
Catering	24%	25%
Transport and communications	14%	23%
Agriculture	28%	17%
Public administration	16%	16%
Health and social welfare	28%	15%
Trade	24%	14%
Education	13%	14%
Electricity, gas and water supply	-4%	12%
Business Services	18%	3%
<b>Average</b>	<b>18.3%</b>	<b>21.6%</b>

Note: 2001 to 2003 for the FBH; and 2002 to 2004 for the RS  
Source: Table AE2

**Appendix Table A2.1**

Average Earnings by Industry: Comparison Between Administrative and Survey Data, 2003

Sector		Administrative	LSMS		
<b>FBH</b>			public	private	informal
A	Agriculture, hunting and forestry	518	453		250
B	Fishing	365		449	
C	Mining	445	423	435	
D	Manufacturing	409	321	565	312
E	Electricity, gas and water supply	676	516	397	499
F	Construction	359	567	634	558
G	Wholesale, retail; certain repair	395	300	561	477
H	Catering	394	434	350	616
I	Transport, storage and communication	685	569	919	1032
J	Financial intermediation	1037	780	759	
K	Real estate, renting and business activities	530	636	644	299
L	Public administration and defense; compulsory social security	694	671		88
M	Education	505	499	584	
N	Health and social welfare	594	582	349	
O	Other social and personal services	539	431	671	614
<b>RS</b>			public	private	informal
A	Agriculture, hunting and forestry	338	309	121	423
B	Fishing	282			280
C	Mining	245	295	580	531
D	Manufacturing	259	121	387	
E	Electricity, gas and water supply	516	318		221
F	Construction	290	183	855	342
G	Wholesale, retail; certain repair	288	199	333	188
H	Catering	216	187	274	271
I	Transport, storage and communication	521	384	501	435
J	Financial intermediation	710	474	626	338
K	Real estate, renting and business activities	461	97	507	290
L	Public administration and defense; compulsory social security	591	370		
M	Education	352	322	232	
N	Health and social welfare	424	337	451	145
O	Other social and personal services	336	253	499	185

Source: Own calculation based on LSMS and Statistical Offices

**Appendix Table A2.2a**  
Separate Entity Regressions: Dependent variable Log(monthly Earnings)  
Federation of BH

	LM Study 2002		Current Study	
	2001	2001	2002	2003
<b>Formal</b>				
Gender differential	0.16	0.16	0.14	0.14
Private/Public	0.24	0.26	0.19	0.12
Firm size	1/2 (wrong sign)	1/3	insign	insign
Work Experience	1/6	Insign	insign	insign
Tenure	Insign	1/6 (wrong sign)	1/6	insign
Waitlisted	-0.40	-0.30	insign	-0.51
Second job	Insign	Insign	insign	insign
Education: primary	Insign	Insign	insign	insign
Education: vocational	Insign	0.19	insign	insign
Education: secondary	0.18	0.30	0.43	0.13
Education: college	0.39	0.63	0.74	0.35
Education: university	0.75	1.05	1.23	0.76
Industrial effects	5/10	3/12	1/12	1/12
Hours		0.25	0.20	0.37
n	1750	538	547	572
R-2	0.34	0.42	0.36	0.26
<b>Informal</b>	2001	2001	2002	2003
Gender differential	0.32	0.27	(0.06)	0.28
Private/Public	na	Na	na	Na
Firm size	insign	Insign	1/3	Insign
Experience	1/6 (wrong sign)	Insign	insign	Insign
Tenure	1/4	Insign	1/6	2/6
Waitlisted	insign	Insign	insign	Insign
Second job	insign	Insign	insign	Insign
Education: primary	-0.47	Insign	insign	Insign
Education: vocational	insign	Insign	insign	Insign
Education: secondary	insign	Insign	0.26	Insign
Education: college	insign	Insign	insign	Insign
Education: university	0.50	Insign	1.04	Insign
Industrial effects	2/10	1/12	insign	1/12
Hours		0.78	0.58	0.73
n	393	109	97	94
R-2	0.37	0.32	0.46	0.38

Notes:

1) See notes to Table 2.10.

2) Differences in the two specifications include: (a) adding hours as a regressor since earnings relate to monthly pay; (b) omitting workers in international organizations since they are not subject to national market forces; (c) restricting the sample to those aged 25-55. The last three columns are based on employees reporting positive monthly earnings between KM40 and KM4000.

Source: World Bank (2002) and own calculations based on the LSMS 2001, 2002 and 2003.

**Appendix Table A2.2b**  
Separate Entity Regressions: Dependent variable Log(monthly Earnings)  
Republika Srpska

	LM Study 2002		Current Study	
	2001	2001	2002	2003
<b>Formal</b>				
Gender differential	0.17	(0.07)	0.11	0.11
Private/Public	0.56	0.61	0.39	0.45
Firm size	insign	insign	insign	insign
Work Experience	insign	insign	insign	insign
Tenure	1/4	insign	insign	insign
Waitlisted	insign	insign	-0.84	-0.52
Second job	insign	insign	insign	insign
Education: primary	insign	insign	-0.32	-0.31
Education: vocational	insign	insign	-0.16	insign
Education: secondary	insign	-0.14	-0.03	insign
Education: college	insign	insign	0.07	insign
Education: university	0.63	insign	0.26	0.29
Industrial effects	7/10	2/12	3/12	4/12
Hours		(0.19)	0.30	(0.23)
n	1485	473	456	423
R-2	0.35	0.36	0.43	0.41
<b>Informal</b>				
Gender differential	0.26	(0.24)	0.44	(0.19)
Private/Public	na	na	na	na
Firm size	insign	insign	insign	insign
Work Experience	insign	insign	insign	insign
Tenure	insign	1/6 (wrong sign)	2/6 (wrong sign)	insign
Waitlisted	insign	insign	insign	insign
Second job	insign	insign	insign	insign
Education: primary	insign	insign	-0.39	insign
Education: vocational	insign	insign	insign	insign
Education: secondary	insign	insign	insign	insign
Education: college	-0.12	insign	insign	insign
Education: university	-0.59	insign	insign	insign
Industrial effects	1/10	3/12	insign	insign
Hours		0.59	0.56	0.47
n	530	130	121	105
R-2	0.12	0.37	0.28	0.14

Notes:

1) See notes to Table 2.10.

2) Differences in the two specifications include: (a) adding hours as a regressor since earnings relate to monthly pay; (b) omitting workers in international organizations since they are not subject to national market forces; (c) restricting the sample to those aged 25-55. The last three columns are based on employees reporting positive monthly earnings between KM40 and KM4000.

Source: World Bank (2002) and own calculations based on the LSMS 2001, 2002 and 2003.



**Appendix Table A3**  
Distribution of covered workers by collective agreements by industry, 2004  
*(constructed table from possibly noisy data)*

	<b>FBH</b>	<b>RS</b>
Agriculture, hunting and forestry	7.6%	5.3%
Fishing	0.0%	0.0%
Mining	6.1%	21.0%
Manufacturing	26.3%	16.6%
Electricity, gas and water supply	5.7%	0.0%
Construction	7.0%	7.7%
Wholesale, retail; certain repair	12.2%	0.0%
Catering	0.0%	6.6%
Transport, storage and communication	9.3%	17.8%
Financial intermediation	2.7%	1.3%
Real estate, renting and business activities	0.0%	0.0%
Public administration and defense; compulsory social security	14.8%	8.2%
Education	8.2%	9.3%
Health and social welfare	0.0%	6.3%
Other social and personal services	0.2%	0.0%
Total (relative)	100.0%	100.0%
<b>Memo items</b>		
Total (number)	262,780	190,790
Estimated employed population	387,381	240,000
Coverage rate	68%	79%

Sources: Own estimates based on union membership data from Entity Trade Union Confederations and employment data from Statistical Offices

**Appendix Table A4**

Employment Shares by Industry : Ratio of LSMS to Administrative Data, Federation 2003

<b>Code</b>	<b>Industry</b>	<b>FBH</b>	<b>RS</b>
A	Agriculture, hunting and forestry	-8.7%	-82.4%
B	Fishing	135.0%	-96.1%
C	Mining	34.3%	51.8%
D	<b>Manufacturing</b>	<b>-3.7%</b>	<b>46.0%</b>
E	<b>Electricity, gas and water supply</b>	<b>15.6%</b>	<b>-32.5%</b>
F	Construction	126.6%	133.3%
G	Wholesale, retail; certain repair	-1.5%	12.8%
H	<b>Catering</b>	<b>19.5%</b>	<b>-44.5%</b>
I	Transport, storage and communication	3.9%	-27.0%
J	Financial intermediation	-33.0%	-92.4%
K	Real estate, renting and business activities	-23.6%	-90.3%
L	Public administration, defense, security etc	-63.4%	-68.7%
M	Education	-24.6%	-2.0%
N	Health and social welfare	-34.4%	-53.7%
O	<b>Other social and personal services</b>	<b>142.9%</b>	<b>25.0%</b>

Note: The correlations between the employment frequencies reported from administrative data and the LSMS were 0.81 (public sector), 0.76 (Private sector) and 0.16 (informal sector); LSMS data refer to all workers, not just employees or those reporting positive earnings.

Source: Own calculations from administrative and LSMS data

**Appendix Table A5**  
**Population in SEE Countries, in thousands**

	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Change</b>
Albania	3.113	3.132	3.150	3.169	3.188	2.4%
<i>Bosnia and Herzegovina</i>	<b>3.977</b>	<b>4.060</b>	<b>4.121</b>	<b>4.134</b>	<b>4.158</b>	<b>4.6%</b>
Bulgaria	7.827	7.913	7.868	7.824	7.424	-5.2%
Croatia	4.381	4.437	4.443	4.442	4.442	1.4%
Macedonia	2.026	2.035	2.020	2.031	2.044	0.9%
Montenegro	0.611	0.613	0.616	0.618	0.620	1.5%
Romania	22.203	22.408	22.355	21.774	21.752	-2.0%
Serbia	7.747	7.727	7.504	7.504	7.504	-3.1%
Total	51.885	52.326	52.077	51.495	51.132	-1.5%

**Average net wage in EUR for SEE Countries**

	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>change</b>
Albania	99.1	116.7	129.2	134.2	169.3	71%
Bosnia and Herzegovina	191.2	226.5	228.0	253.1	258.2	35%
Bulgaria	94.9	100.2	111.0	115.1	122.6	29%
Croatia	435.4	474.1	502.1	520.8	556.6	28%
Macedonia	172.4	173.7	190.8	193.6	201.0	17%
Montenegro	96.3	107.7	142.1	174.0	195.9	103%
Romania	107.2	116.0	121.2	128.9	147.2	37%
Serbia	45.4	98.3	151.8	176.2	193.0	325%

Notes: Albania: public sector wages only are included; Bosnia and Herzegovina: simple average for data in Republika Srpska and Federation of B&H; Bulgaria - data for 2004 are for Q4 only; Croatia, Macedonia, Montenegro: net wage doesn't include allowances for food, transport etc.; Romania Serbia  
Source: Staff calculations

**Appendix Table A6**  
Minimum wages

	<b>RS</b>		<b>FBH</b>	
	Amount in KM	Ratio of MW to AW	Amount in KM	Ratio of MW to AW
1997	55.00	0.49	85.00	0.32
1998	60.00	0.35	85.00	0.26
1999	60.00	0.28	206.00	0.55
2000	80.00	0.29	227.00	0.55
2001	80.00	0.26	243.79	0.55
2002	82.00	0.24	265.49	0.55
2003	82.00	0.22	291.14	0.55
2004	82.00	0.19	293.36	0.55

RS wages 1997-98 converted from YUD

**Appendix Table A7**  
Industrial monthly earnings ranked in relation to the BH average

FBH	Financial intermediation	1037	214%
RS	<i>Financial intermediation</i>	710	147%
FBH	Public administration and defense	694	143%
FBH	Transport, storage and communication	685	142%
FBH	Electricity, gas and water supply	676	140%
FBH	Health and social welfare	594	123%
RS	<i>Public administration and defense</i>	591	122%
<b>FBH</b>	<b>Average</b>	<b>543</b>	<b>112%</b>
FBH	Other social and personal services	539	111%
FBH	Real estate, renting and business activities	530	109%
RS	<i>Transport, storage and communication</i>	521	108%
FBH	Agriculture, hunting and forestry	518	107%
RS	<i>Electricity, gas and water supply</i>	516	107%
FBH	Education	505	104%
<b>BH</b>	<b>Average (both)</b>	<b>484</b>	<b>100%</b>
RS	<i>Real estate, renting and business activities</i>	461	95%
FBH	Mining	445	92%
RS	<i>Health and social welfare</i>	424	88%
FBH	Manufacturing	409	85%
FBH	Wholesale, retail; certain repair	395	82%
FBH	Catering	394	81%
<b>RS</b>	<b>Average</b>	<b>389</b>	<b>80%</b>
FBH	Fishing	365	75%
FBH	Construction	359	74%
RS	<i>Education</i>	352	73%
RS	<i>Agriculture, hunting and forestry</i>	338	70%
RS	<i>Other social and personal services</i>	336	69%
RS	<i>Construction</i>	290	60%
RS	<i>Wholesale, retail; certain repair</i>	288	60%
RS	<i>Fishing</i>	282	58%
RS	<i>Manufacturing</i>	259	54%
RS	<i>Mining</i>	245	51%
RS	<i>Catering</i>	216	45%

Note: Monthly wages (employment) in 2003 were reported to be 543 (387,381) in the Federation and 389 (240,000) in the Republika.

Source: Calculated from Appendix Table AE2

**Appendix Table A8**  
**Trade Union Structure and Density in BH**

**RS Trade Union Confederation**

	Membership
1 Trade Union of Metalworkers and Miners	17,000
2 Trade Union of Communal Services Workers	18,000
3 Trade Union of Forestry and Wood-Processing Workers	19,040
4 Trade Union of Textile Workers	20,000
5 Trade Union of Agricultural Workers	10,700
6 Trade Union of Tourism and Trade	6,000
7 Trade Union of Transport Workers	18,000
8 Trade Union of Teachers	17,290
9 Trade Union of Financial Services Employees	2,000
10 Trade Union of Health Workers	12,000
11 Trade Union of Police and Interior Ministry staff	8,300
12 Trade Union of Legal System employees	1,800
13 Trade Union of Administration Staff	5,500
14 Trade Union of Information Technology and Graphics Workers	1,500
<b>Total Membership</b>	<b>157,130</b>
<b>Total Number of Employed in RS 2004</b>	<b>236,899</b>
<b>Union Density</b>	<b>0.66</b>

**FBH Confederation of Independent Trade Unions**

	Membership
1 Trade Union of Electricity Workers	7,500
2 Trade Union of Utility Workers	7,400
3 Trade Union of Railway Workers	7,500
4 Union of Independent Police Workers' Associations	11,300
5 Commerce Trade Union	32,000
6 Trade Union of Graphical Workers	2,500
7 Trade Union of Secondary School teachers	7,700
8 Trade Union of Primary School teachers	13,930
9 Trade Union of Metal Workers	26,000
10 Trade Union of Construction Workers	18,300
11 Trade Union of Forestry and Wood-Processing Workers	17,800
12 Trade Union of Civil Servants	19,500
13 Trade Union of BH Telecom	5,000
14 Trade Union of Chemical Industry Workers	4,850
15 Trade Union of Miners	16,000
16 Trade Union of Financial Services Workers	7,100
17 Trade Union of Media and Print Employees	2,500
18 Trade Union of Oil and Petrochemical Industry Workers	1,900
19 Trade Union of Textile and Leather Industry Workers	18,500
20 Trade Union of Transport Workers	12,000
21 Trade Union of BH Post	3,000
22 Trade Union of Soccer Players	500
23 Trade Union of Agriculture and Food Processing Workers	20,000
<b>Total Membership</b>	<b>262,780</b>
<b>Total Number of Employed in FBH 2004</b>	<b>388,100</b>
<b>Trade Union Density</b>	<b>0.68</b>

## Employers' Associations in Bosnia and Herzegovina

**Appendix Table A9: The Union of Employers FBH**

Employers' Association	Number of Companies
Zavidovici	70
Zepce	70
Busovaca	30
Zenica	110
Drvo BH	66
Association of independent craftsmen	2,350
Kiseljak	60
Tomislavgrad	40
Fojnica	92
Association of communal companies	185
Vares	68
Sarajevo Canton	15
Tuzla Canton	10
Gorazde Canton	10
Una Sana Canton	15
Business Club Lasva Vitez	55
Stolac	75
Livno	70
Kresevo	50
Odzak	45
Vitez	98
Novi Travnik	57
Tesanj	40
Maglaj	50
Link Mostar	207
Association of SMEs Ljubuski	68
Kakanj	35
Mostar	70
<b>TOTAL (companies)</b>	<b>4,111</b>
<b>TOTAL (workers)</b>	<b>90,000</b>

**Employers' Confederation RS, see [www.poslodavci.rs.ba](http://www.poslodavci.rs.ba)**

<b>Appendix Table A10</b>			
Pension contributions on employee gross wage			
<b>Country</b>	<b>Employer</b>	<b>Employee</b>	<b>Both</b>
Belarus	35.0	1.0	36.0
Uzbekistan	31.6	2.5	34.1
Ukraine	32.0	2.0	34.0
Poland	16.3	16.3	32.5
Romania	22.0	9.5	31.5
Moldova	28.0	2.0	30.0
Albania	21.3	8.6	29.9
Kyrgyz	21.3	8.6	29.9
Azerbaijan	27.0	2.0	29.0
Bulgaria	21.8	6.5	28.3
Georgia	27.0	1.0	28.0
Russia	28.0		28.0
Slovakia	21.6	6.4	28.0
Czech	19.5	6.5	26.0
Hungary	18.0	8.0	26.0
Tajikistan	25.0	1.0	26.0
Slovenia	8.9	15.5	24.4
Armenia	19.3	3.0	22.3
Estonia	20.0	2.0	22.0
Montenegro	9.6	12.0	21.6
Serbia	10.3	10.3	20.6
Croatia		20.0	20.0
Macedonia	20.0	0.0	20.0
Turkey	11.0	9.0	20.0
<b>BH-FBH</b>	<b>5.3</b>	<b>12.6</b>	<b>17.9</b>
<b>BH-RS</b>	<b>15.8</b>		<b>15.8</b>
Kazakhstan		10.0	10.0

Source: Bank reports. Note: provisional data and subject to comparability issues



**Appendix Table A.11**  
Annual Growth Rates in Real Average Wages, 2001-2003

	FBH	RS	BH
Male			
all workers	10%	5%	10%
all employees	9%	5%	9%
employees in the public sector	8%	6%	9%
employees in the private sector	3%	-9%	-1%
employees in the informal sector	13%	2%	10%
Female			
all workers	8%	7%	9%
all employees	8%	8%	9%
employees in the public sector	10%	15%	13%
employees in the private sector	18%	-12%	5%
employees in the informal sector	-5%	-1%	-4%
Both			
all workers	10%	5%	9%
all employees	8%	6%	9%
employees in the public sector	9%	9%	10%
employees in the private sector	6%	-12%	0%
employees in the informal sector	8%	1%	6%
Memo (administrative data)			
Increase in average nominal wages	9%	11%	
inflation	0%	2%	
Real	9%	9%	

Note: Based on workers with positive earnings only

Source: Own calculations from LSMS

# APPENDIX III: MTDS/PRSP – LABOR MARKET REFORMS

## Medium-Term Development Strategy (MTDS/PRSP) Action Plan – Labor Market Reform

No.	Activity	Responsible Institution	Deadline	Goal/Comment
<b>LAWS AND REGULATIONS</b>				
1	Change entity contribution laws	FBH Government, RS Government	First half of 2004	To harmonize employment insurance rates and unemployment assistance cash benefits, equalize rights and increase the mobility of labor force (the unemployment rates in both entities are nearly identical, so should be the contribution rates).
2	Change the FBH Law on Employment Brokerage and Social Security of the Unemployed and RS Law on Employment	BH Council of Ministers FBH Government, RS Government	First half of 2004	To establish harmonized criteria for acquiring and losing the status of an unemployed person, to ease the conditions for acquiring right to the unemployment cash benefit, to tighten the criteria for acquiring the right to health insurance, to equalize the level of the cash benefit for BH and to stimulate an increase in mobility of the labor force.
3	Adopt the legislation that will permit out-of-school education	FBH Government, RS Government	First half of 2004	To allow for subsequent acquisition of new and improving on existing qualifications.
4	Adopt the new legal framework on labor inspectorates	BH Council of Ministers, FBH Government, RS Government	First half of 2004	To increase the efficiency of combating informal economy.
5	Adopt the laws or ordinances to strengthen the existing unemployment protection system to provide a more adequate protection for workers who, owing to accelerated reforms (privatization, bankruptcy, liquidation etc.) lose their jobs, without their responsibility	FBH Government, RS Government	First half of 2004	To accelerate the reform process.
6	Adopt the Law on Employment in the Brčko District	Government of the Brčko District	Second half of 2004	To unify employment bureaus in the Brčko District and introduce an unemployment protection system.
7	Change the legislation to permit the scope of the right to unemployment benefits depends on the duration of past labor and the period during which the wage contributions were paid.	FBH Government, RS Government	Second half of 2004	Justice in use of unemployment benefits.
8	Adopt the legislative framework which will ensure employment of 3 to 5% of the disabled in the civil service	BH Council of Ministers, FBH Government, RS Government	First half of 2004	To improve the system of social protection.
<b>INSTITUTIONS</b>				
9	Strengthen the Economic and Social Councils	FBH Government, RS Government, trade unions, employers' associations	Continuously	To involve employers into the tripartite dialogue and introduce greater flexibility into the wage system.
10	Establish the BH Economic and Social Council	BH Council of Ministers	First half of 2005	To strengthen the tripartite dialogue at the level of BH.
11	Reorganize employment bureaus	FBH Government, RS Government	Second half of 2004	To increase their efficiency.
<b>MEASURES</b>				
12	Consistently implement	BH Council of	Continuously	To ensure equal rights and facilitate

No.	Activity	Responsible Institution	Deadline	Goal/Comment
	constitutional changes which require all levels of government to ensure that the composition of public employees is in line with the ethnic composition of the inhabitants from the 1991 Census	Ministers, FBH Government, RS Government	in the course of 2004	returns.
13	Review existing collective contracts	Economic and Social Council of FBH, Economic and Social Council of RS	Second half of 2004	To reduce the informal economy and increase employment.
14	Implement the reform of the wage system: review the existing level of the minimum wage, regulations on redundancy pay and on calculations of past labor	Economic and Social Council of FBH, Economic and Social Council of RS	Second half of 2004	To reduce the informal economy and increase employment, to link the wage system exclusively to labor productivity.
15	Equalize benefits and rights arising from unemployment and from health insurance	BH Council of Ministers FBH Government, RS Government	First half of 2004	To ensure equal rights of citizens, strengthen the single economic space, increase the mobility of labor force and sustainability of returns.
16	Precisely define and tighten the criteria for acquiring and losing the status of an unemployed person, as well as for right to unemployment benefits, and particularly for health insurance	FBH Government, RS Government	First half of 2004	To reduce the informal economy
17	Equalize the level of allocations for health insurance of the unemployed for all cantons in the FBH	FBH Government, RS Government	First half of 2004	It is unsustainable that the monthly payment varies from 4 to 10 KM across the cantons for the same set of rights.
18	Encourage employers to cross from the informal into the formal sector, through exemptions or reductions of wage contributions	FBH Government, RS Government	Continuously in the course of 2004	To increase the number of employees, reduce the informal economy, financially strengthen budgets and funds and open possibilities for employers to create new jobs.
19	Establish IT connections between local employment agencies throughout BH and establish a single and compatible system; reinforce the employment agencies' role in identifying needs in local labor markets and in employment brokerage	FBH Employment Bureau, RS Employment Bureau	In the course of 2004	To exchange available information on labor demand and increase mobility of the labor in BH; to assist the unemployed in finding jobs.
20	For the groups among the young who are in a particularly difficult situation, such as orphans or school drop-outs, special employment programs must be developed, e. g. through subsidies to companies which employ them.	FBH Ministry of Labor and Social Policy, RS Ministry of Health and Social Protection	Continuously	To increase employment among the special categories of the young.
21	Within the ongoing education reform, perform a detailed analysis of the demand in the labor market	FBH Employment Bureau, RS Employment Bureau, FBH Ministry of Education and Science, RS Ministry of Education and Culture	Second half of 2004	To direct the structure of the education in relation to the domestic and international labor demand.
22	Restrict administrative costs of employment agencies as a share of their total resources	FBH Government, RS Government	First half of 2004	To rationalize expenses and increase the share of resources channelled into the core tasks of the employment agencies.
23	Establish tripartite management of employment agencies (governments, unions, employers)	FBH Government, RS Government	Second half of 2004	To ensure involvement of all interested parties and implementation of obligations arising from the ILO conventions.

# APPENDIX IV: COMPARISON OF BRANCH COLLECTIVE AGREEMENTS AND GENERAL COLLECTIVE AGREEMENTS

## Republika Srpska

RS	Branch Collective Agreements		GCA	Proposed new draft GCA
<b>The scope</b>	The Individual CA (at the enterprise level signed between Steering Board and the Enterprise's Unions ) should be consistent with this BCA			
<b>Signing parties</b>	Branch Trade Unions of RS, Government of RS or relevant Ministry and, in some cases, Chamber of Commerce RS		RS Government, SSRS, Chamber of Commerce	RS Govt, SSRS, RSCC, ECRS
<b>Obligatory parties</b>	Enterprises at the territory of RS in the field of the construction and utilities (The Employer) and the employees of these enterprises (The employees)		All enterprises in the RS	All enterprises in the RS
<b>Wage Base/Minimum Wage</b>	Wage = base x coefficient x ( 1+ 0.5 x n ) + supplements; n= years of service, not exceeding 20	wage base = minimum price of labor	minimum price of labor	minimum price of labor
<b>Coefficients</b>	Coefficients vary between branches, from 1 to 5-7			
	I group - non-qualified worker	1.5 -	specifies a system of coefficients according to complexity of work with coefficients between 1 and 6	
	II group - semi-qualified worker	1.6 - 1.8		
	III group- medium complexity works, qualified worker	1.7 - 2.3		
	IV group –complex and diversified work, secondary education	2.4 - 2.8		
	V group – complex work , highly qualified worker	2.8 - 3.2		
	VI group - complex and specialized work, two year higher education	3.3 - 3.9		
	VII group - highly complex and diversified work, work in organization and management, higher education	4.0 - 4.8		
	VIII group - highly complex and expert work, higher education plus specialist degree (master)	4.8 - 5.4		

RS	Branch Collective Agreements		GCA	Proposed new draft GCA
	IX group - highly complex and creative work , higher education, plus PhD	5.4 - 5.9		
Wage increase:	special stimulations	subject of the Rulebook		
	seniority - for each year	0.5% per year of service, maximum 20%	0.5% per year of service	0.3% per year and not more than 10%
	work under especially difficult conditions	at least 20%	at least 20%	BCAs
	achievement in work	at least 20%	at least 20%	BCAs
	most complex functions in the enterprise	at least 20%	at least 20%	BCAs
	Night work	30% per hour	30% per hour	35% per hour
	Overtime	35% per hour	35% per hour	35% per hour
	Work on weekend	30% per hour		
	Work on State holidays	50% per hour	50% per hour	50% per hour
Allowances	Hot meal - if it is not available in food	one amount of the MW	one amount of the MW	50 % of MW
	Transportation to work	real costs of public transportation	real costs of public transportation	real costs of public transportation
	Annual leave grants	3 min wages in the enterprise in the last month	3 min wages in the enterprise in the last month	3 MWs, but according to BCAs
	Per diem	30% of the min. labour price	30% of the min. labour price	15% of MW
	funds for heating and winter food providing	3 amounts of the average wage in the enterprise	3 amounts of the average wage in the enterprise	
	Field work (if employee is not coming back home)	10% of the min. labour price per day	10% of the min. labour price per day	up to 10% of the MW per day
	Temporary redundancy	70-80% of his/her regular wage per month		
	Retirement	3 of his/her last wages	3 of his/her last wages	3 of his/her last wages
	Severance		for 10 years of work history 40% of last worker salary per year of service, for 10-20 years 50%, for 20-30 years, 60%, for over 30 years 70% of last worker salary per year of service	for 10 years of work history 35% of last worker salary per year of service, for 10-20 years 40%, for 20-30 years, 45%, for over 30 years 50% of last worker salary per year of service
	Death of the employee	funeral costs	funeral costs	3 Average Wages
	Death of the employee's member of the close family	4 amounts of the min. wage in the enterprise	4 amounts of the min. wage in the enterprise	4 MWs
	Heavy disability of the employee	at least 2 amounts of the average wage in the enterprise	at least 2 amounts of the average wage in the enterprise	2 MWs
	long illness or injury of the employee	at least 2 amounts of the average wage in the enterprise	at least 2 amounts of the average wage in the enterprise	2MWs
	long illness or injury of the close family member	2 average wages		BCAs
	natural disaster	at least 2 amounts of the average wage in the enterprise	at least 2 amounts of the average wage in the enterprise	BCAs
Paid leave		at least		
	marriage	5 days	5 days	3 days
	child birth	2 days	2 days	1 day
	death of a close family member	4 days	3 days	3 days

RS	Branch Collective Agreements		GCA	Proposed new draft GCA
	death of brother or sister	3 days	1 day	
	natural disaster	3 days		
	illness of the close family member	3 days	1 day	2 days
	moving	2 days	1 day	
	blood donation	2 days	2 days	2 days
<b>Guaranteed wage</b>	In the case the employer faces financial difficulties, he is obliged to pay workers the guaranteed wage - in the amount of 65-70% of the employee's basic wage - but not longer than agreed.		65% for no longer than 6 months	

## Federation of BH

FBH	Branch Collective Agreements		2000 GCA	2005 GCA
<b>Signing parties</b>	Trade unions of metal workers of BH and Government of FBH		Government and Trade Unions	Government, Trade Unions, Employers' Association
<b>Obligatory parties</b>	Enterprises with state or majority state capital at the territory of FBH in the metal processing industry (The Employer) and the members of the Unions that signed BCA (The employees)		All employers	All employers
<b>Exceptions</b>	employers and employees with special authorization, whose rights and responsibilities have been a subject of separated contract			Vulnerable industries can temporarily opt out of minimum wage limit
<b>Wage Base</b>	Wage = base x coefficient x (1 + 0.6 x n) + supplements; n= years of service, not exceeding 20	wage base = min. wage = 55% of the average wage in the FBH, last reported by FBH Statistical Office, in some branches between 60 and 100%	wage base = min. wage = 55% of the average wage in the FBH, last reported by FBH Statistical Office	wage base = min wage, set at net hourly rate not lower than KM 1.75, adjusted annually according to the "cost of living, retail prices and development in the economy"
<b>Coefficients</b>	Coefficients vary between branches, between 1 and 3-6.5			
<b>example</b>	I group - simple, routine work	1	Coefficients subject to BCAs	Coefficients subject to BCAs
	II group - less complex work, semi-qualified worker	1.25		
	III group - medium complex work, 3 year secondary education	1.55		
	IV group - more complex, and more diversified work, 4 year secondary education,	1.7		
	V-1 group - very complex work, that include organization of control, management, significant for the success of the work at other levels, highly qualified worker	2.1		
	V-2 group - very complex work, that include organization of control, management, significant for the success of the work at other levels, highly qualified worker	2.3		

FBH	Branch Collective Agreements		2000 GCA	2005 GCA
	VI group – complex and specialized operations, preparation, monitoring and analytical evaluation of processes..... 2 or 4 year higher education	2.4		
	VII-1 group - complex and highly complex diversified operations, ...2 or 4 year higher education	3		
	VII-2 group -very complex work, analytical studying and scientific research..., 4 year higher education plus specialized knowledge/master degree	3.4		
	VIII group - very complex work, with initiative and creativeness, solving most complicated problems and transferring theory into practice , PhD	4		
<b>Wage increase:</b>				
	Stimulations	discretionary right of the employer	discretionary right of the employer	
	seniority - for each year exposure to noise, dust, positioned vapor, heavy weather	0.6%, not exceeding 20%	0.6%, not exceeding 20%	0.6%, not exceeding 20%, but only for the same employer
	Night work	50% per hour	30% per hour	30% per hour
	Overtime	50% per hour	50% per hour	30% per hour
	Work on state holidays	50% per hour	50% per hour	50% per hour
	Work on weekends	20% per hour	20% per hour	20% per hour
<b>Allowances</b>				
	Living separated from the family	70% of the last reported average Federal wage ( minus 30% if accommodation is organized, and minus another 30% if meals are organized)	70% of Average Wage	to be regulated in BCA or employment contract
	Hot meal - if it is not available in food	25% of the last reported average Federal wage	25% of the last reported average Federal wage	20% of the last reported average wage in FBH
	Transportation to work	settled by the Rulebook	settled by the Rulebook or employment contract	settled by the Rulebook or employment contract
	Annual leave grants	70% of the last reported average Federal wage	70% of the last reported average Federal wage	50% of average net wage, if employer is not making losses
	Per diem -	10% of the last reported average Federal wage ( minus 30% if meals and accommodation is organized)	10% of the last reported average Federal wage ( minus 30% if meals and accommodation is organized)	to be regulated in BCA
	Field work (if employee is not coming back home) - not less than 30 days	not less than 75% of the per diem (if free meals or free accommodation is organized minus 50%, and if both minus 80%)	not less than 75% of per diem	to be regulated in BCA
	Death of the employee	1 last reported average wage in FBH	3 Average Wages	3 Average Wages
	Death of the employee's spouse, child or parent	1 last reported average wage in FBH	2 Average Wages	2 Average Wages

<b>FBH</b>	<b>Branch Collective Agreements</b>		<b>2000 GCA</b>	<b>2005 GCA</b>
	Heavy disability	1 last reported average wage in FBH		
	Heavy disability of spouse or child	1 last reported average wage in FBH		
	Retirement	3 last reported average wages in FBH	3 Average Wages	3 Average Wages
	Dismissal - severance pay	According to Labor Law	According to Labor Law or BCA	According to Labor Law
<b>Anniversary awards</b>	specified in some BCAs			
	10 years of work	50% of the last reported average wage in FBH		
	20 years of work	70% of the last reported average wage in FBH		
	30 years of work	85% of the last reported average wage in FBH		
	35 years of work	100% of the last reported average wage in FBH		
<b>Paid leave</b>	in total 7 days annually			
	marriage	3 days		
	child birth	2 days		
	marriage of the child	2 days		
	death of the close family member	4 days		
	death of the other family member	2 days		
	sickness of the close family member	2 days		
	blood donating	1 day		
	moving	1 -2 days		
	education	5 days		
	participation in cultural and sport events	3 days		



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# APPENDIX V: UNIONS AND INDUSTRIAL RELATIONS IN AN INTERNATIONAL CONTEXT

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## Introduction

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1. The effects of unionism or collective bargaining vary depending on whether the economy is competitive or not and whether it is an open or closed one. Each type of economy can give rise to different effects of an otherwise identical configuration of organized labor. Even for the same economy, and union characteristics, effects can be different depending on the organization (or not) of employers who can react in a centralized or decentralized way and on how Governments perceive and apply labor and broader social policies. There are potential dozens of combinations of different types of economies, unions, employers and collective bargaining arrangements and each one deserves to be examined in its own right. The BH economy is no exception to this and the remarks below provide an overview of the issues involved and attempt to summarize the findings from the international literature.<sup>82</sup>

### *What Do Unions Do?*

2. Unions and collective bargaining can affect positively or negatively economic performance. Though much depends on the specific conditions in which the social partners operate, much depends also on what unions do. The views on what unions do can be classified in three main groups.

3. First, the traditional “monopoly view” focuses on the social costs of unionization arising from distortions when unions succeed to obtain more favorable pay and more general work conditions for their members than non-unionized workers in *an assumed perfectly competitive economy* (not just the labor market)<sup>83</sup>. When unions succeed in securing such benefits that would not have been possible under competitive conditions, they impose costs on society, which are called **the monopoly costs** of unions.

4. A second view also considers unions to be detrimental to economic outcomes as they create **rent-seeking costs**. In this view, unions are seen as representatives of special interests of their members in collective bargaining and in the political process. Unions can promote policies that reduce competition in labor *and product* markets. This includes support for minimum wage legislation or trade protection. Unions support such policies if they increase the surplus available for sharing with the firm (the effect of less competitive product markets) or increase the union’s

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<sup>82</sup> The current review is drawn from T. Aidt and Z. Tzannatos (2002) “Unions and Collective Bargaining: Economic Effects in a Global Environment” Washington DC: The World bank ((Publisher).

<sup>83</sup> This is a “strong” assumption i.e. unlikely to be met in practice in the real world. But it serves as a useful theoretical point for benchmarking variations of economic models.

bargaining power (less competition from nonunion labor markets). In addition, unions can engage in political activities and can generally involve three types of (static) costs. First, to the extent that the union is successful in getting government regulation, an economic distortion is created, and the resulting inefficiency creates a deadweight loss to society. Second, real resources are withdrawn from production to be used in rent-seeking: To the extent that the shadow price of these resources is positive, this constitutes another loss to society. Third, since the union's distributive success typically comes at the expense of nonunion workers and consumers, a union's political activities may be associated with large distributional costs. In addition to these static costs, rent-seeking can lead to dynamic costs: rent-seeking can be harmful to innovations and thus hampers economic growth.

5. The third, and final, view, which is called the "organizational view" of unions, counters the previous two views and acknowledges that unions can have economic benefits. Unions can facilitate worker-participation and worker-manager cooperation in the workplace. This can have efficiency-enhancing effects that jointly benefit workers and management and are called **the participatory benefits of unions**. Such benefits can arise because, first, unions are institutions with a collective voice and can communicate worker preferences to management, as well as participate in the establishment of work rules and seniority provisions in the firm's internal labor market. This changes the "exit-voice" tradeoff of workers by providing a channel through which they can express their grievances ("voice") without having to leave the firm ("exit"). By reducing turnover ("voting with the feet"), this channel increases the incentive of employers to provide firm-specific training, and facilitates long-term working relationships that can benefit *all* parties. From their side, unions may help to enforce contracts between workers and management and thus increase productivity by providing a channel through which labor can draw management's attention to changes in working methods or production techniques that may be beneficial to both parties. This channel also offers a mechanism by which the union can "shock" management into better practices (reduce X-inefficiency).

6. We can summarize the above discussion of the costs and benefits of unions using the following simple equation:

$$\text{Net benefit of unions} = \text{participatory and dispute resolution benefits} - \text{monopoly costs} - \text{rent-seeking costs}.$$

Alternatively, one can talk of cost and rewrite this equation as

$$\text{Net cost of unions} = \text{monopoly costs} + \text{rent-seeking costs} - \text{participatory and dispute resolution benefits}.$$

7. From a theoretical perspective, the net benefit/cost of unions is ambiguous and dependent on the relative size of the three components. These in turn depend significantly on the economic, political, and organizational environment in which collective bargaining takes place. The economic environment affects both the monopoly costs and the participatory benefits. The political environment determines the rent-seeking activities of unions. The organizational environment (bargaining coordination, social partnership, and dispute resolution) affects all three components. Thus, judging the contribution of unions and, more generally, collective bargaining to the achievement of economic and social outcomes is, at the end of the day, an empirical question as unions are only one agent in the labor market which is thought to be tripartite (workers, employers, governments). Much depends also on what the other two social partners do and how all three interact in an attempt to determine wages, employment and work conditions. Eventually, all three are constrained by the state of the national economy (competitive or not) and its relationship to the rest of the work (trade openness). In other words, it is the coordination

between the social partners that determine outcomes, not just simply the membership of unions or employers associations.

### ***What Do Employers' Organizations Do?***

8. The members of an employers' organization are individual firms, typically within a particular industry. Each employers' organization may in turn be a member of a national employers' organization. A firm may decide to join an employers' organization to improve its bargaining position with workers (possibly organized in a union). Firms derive their bargaining power from their ability to lock out workers. The cost of an industrial conflict from the point of view of an individual firm is larger than the cost to the industry as a whole. This is because an individual firm involved in a strike is likely to lose its market share to other firms in the industry that produce close substitutes. Accordingly, whereas each firm has an incentive to give in to wage demands (called *wage drift*) to avoid a local conflict, the industry as a whole has less incentive to do so, and by joining forces, it is easier for firms to resist wage demands from unions.

9. Employers' organizations can also help reduce *leap frogging*. Leap frogging occurs when individual firms increase their wage rate to extract more effort from existing workers or to attract skilled workers from other firms. When all firms engage in this kind of behavior, the net result may well be that relative wages are unchanged but the level of all wages has increased substantially. A strong employers' organization that coordinates the behavior of individual firms can be helpful in internalizing this "efficiency wage externality" and preventing wage drift (as discussed above).

10. In addition, employers' organizations play an important role in providing training: Since general training is a public good, firms are unlikely to provide much of it unless they are subject to external pressure. A strong employers' organization can provide training facilities for firms and can impose sanctions if a firm does not pay its share of the cost.

### ***Dispute Resolution***

11. The breakdown of negotiations between individual workers and their employers can take various forms, ranging from poor relations in the workplace (with potential costs including decreased levels of labor productivity through poor morale) to labor turnover (the "exit" option, with the potential loss to the employer of previously made investments in the workers' human capital). At the level of collective contracting, the stakes are arguably much higher for both workers (and their unions) and employers, with the ultimate cost of a negotiation breakdown being lost incomes for the workers and lost profits for employers. Given the potentially high level of these costs to both contracting parties, it is likely that workers and employers have a strong incentive to achieve a solution in preference to conflict. Like all good threats, the employer's threat of a lockout and the union's threat of a strike are best if they ensure that an agreement is reached before they are implemented.

12. In reality, collective bargaining does sometimes break down, and production, labor earnings, and profits are lost. It is certainly not safe to assume that the total of such costs is greater under the collective bargaining system than under the individual contracting system. We simply do not know whether these costs to society are greater or less than those that would arise from a breakdown in individual employer-employee pay negotiations. Indeed, given economies of scale in the production and dissemination of information, there are grounds for believing that the collective system, through its ability to resolve disputes, may be a less costly option from a social point of view than individual contracting.

13. There is a strong presumption that when disputes do occur under collective bargaining, it is because of asymmetries in the information possessed by the involved parties. A common example is when the trade union “misjudges” the maximum wage that the employer is willing or able to pay. Under such circumstances, the existence of regulation can prove decisive in resolving disputes through its information-gathering and -disseminating roles.

14. To understand the process, it is important to recognize the distinction between the union proper (sometimes called the official union) and its rank and file membership. Under this tripartite framework, the official union (often as a well-informed professional body) acts as an intermediary between the union membership and the employer. As such, its role is to reconcile the aspirations of the former against what it judges (on the basis of its more complete knowledge of the overall situation than that possessed by the union membership) that the employer would agree to pay. This reconciliation between worker aspirations and labor market realities may be achieved without either party having to resort to its no-trade sanction. However, should negotiations break down and a dispute occur, the role of the official union as a purveyor of information continues, with information being disseminated in both directions regarding concessions acceptable to each party and any new information that may materialize as the dispute progresses. This transmission of information continues until demands fall into balance with offers, at which time a settlement is achieved.

15. Viewing a union as an information-gathering and -disseminating body suggests that governments might want to adopt policies that increase the efficacy with which unions fill this role. The introduction of so-called cooling-off periods, during which all parties take time to assess the situation fully before implementing no-trade strategies, is one example. Other such policies might require that the employer (generally seen as the party in possession of more complete information) divulge to the union and its members certain types of information, perhaps in a standard form, to minimize the possibility that disputes will arise because workers incorrectly estimate the employer’s ability to pay.

16. Some conflict is inevitable when wages and other employment conditions are set by negotiation (either collective or individual), rather than by the invisible hand of the market. And of course the above view that trade unions are well-informed bodies that look after the interests of their members may not be always true: there have been examples when union leaders have genuinely misjudged the actual situation or escalated conflict more for their own reasons.<sup>84</sup> Recognizing this fact, there are grounds for believing that a well-run centralized, union-based system of wage bargaining may be less costly to society than an individually based negotiating system in terms of both total transaction costs and dispute costs. Alternatively, miscalculations or mistakes in a centralized system may have more pandemic effects than those that would arise in a decentralized framework.

### *Summary of Outcomes*

17. There is no single variable capturing the “goodness” or “badness” of unions – both terms are often used to describe unions in the common press (though not in the professional literature). At the micro level economists have used many different indicators of labor market performance such as those affecting workers (level of wages, hours of work, job mobility, training, benefits) or firms (profitability, productivity, employment growth, investment, research and development).

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<sup>84</sup> Such reasons may be personal ambition but need not always be so: they may, for example, relate to the unions leaders’ political belief that the time is ripe for conflict in a broader political context.

Obviously, some good things for one party (for example, higher wages or shorter work hours for workers) are bad for the other (for example, low productivity or profitability).

18. At the macroeconomic level, economists have examined certain key indicators (such as economic growth, aggregate productivity, inflation, unemployment, wage growth, earnings inequality and employment growth) or combinations of various indicators (such as the Okun's index – the sum of the unemployment rate and the inflation rate, or the job quality index that compares changes in employment against wage dispersion). Others have focused more directly on effects on the aggregate labor market examining, for example, the effects on unions on aggregate real wage flexibility (to unemployment), employment adjustment speed to real wage shocks or search effectiveness (the relationship between vacancies and unemployment).

19. In all, the international literature on the subject covers thousands of published articles and books and utilizes more than a couple of dozen micro and macro indicators that are affected by many and diverse combinations of collective bargaining operating under different political regimes. The first, and safest, conclusion can only be that the jury is still out. In other words, whether unions and collective bargaining are “good” or “bad” depends on what they do, what employers do, how the two parties interact in the labor market, how the government interferes (or not) in the economy, and what kind of economy the social partners face (competitive or not, open or close).

20. Still, some generalizations are possible. At the micro level, empirical evidence confirms that unionized workers and those covered by collective agreements enjoy higher wages and shorter working hours and tend to receive more training than comparable non-unionized and uncovered workers. The union effects on other aspects of the labor market are more diverse. For example, voluntary turnover is lower and job tenure is longer in unionized firms but layoffs (particularly temporary ones) are more frequent in unionized firms. R&D tends to be lower in unionized firms which however seem to adopt new technology as fast as non-unionized ones. Productivity effects can be in either direction depending on the industry, country and time under  
\* investigation.

21. At the macro level, the evidence is generally more fragile though *labor market coordination* (not necessarily through high unionization rates) seems to lead to lower dispersion of labor earnings and is at times associated with lower unemployment and fewer strikes. However, both coordinated and uncoordinated labor markets seem to fare comparably in terms of productivity growth and wage flexibility while there is no substantial difference between these two systems in terms of inflation and employment rates.

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## Empirical Evidence

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22. There is a large body of empirical literature on the economic effects of unions derived from microeconomic data on individual workers and establishments. It covers the union/nonunion wage markup, both overall and also in terms of skills, gender, occupation as well as the underlying economic conditions and the institutional environment. It also examines the effect of unions on other economic variables such as employment growth, hours worked, productivity, job mobility, the implementation of new technology, physical investments, spending on R&D, training of workers, profitability, fringe benefits, mode of pay, and pension schemes. These are examined below.

### *The Wage Markup in Different Countries*

23. The union/nonunion wage markup (the “wage markup”) is defined as the difference between the average wage of unionized and non-unionized workers with similar individual and workplace characteristics divided by the average wage of a non-unionized worker.<sup>1</sup> The markup can be estimated in different ways. First, it can be estimated as a *membership markup*. The membership markup is based on information about an individual’s union status and calculates the difference in wages between individual unionized and non-unionized workers. Second, it can be estimated as a *recognition markup*. Here workers are being categorized according to whether or not their pay is determined by a collective agreement between a recognized union and a firm. In the latter case, individual union membership is not crucial. What matters is whether the workers’ pay is determined by a collective agreement. The distinction between the membership and the recognition markup is important when not all the workers whose wages are determined by a collective agreement are union members. For example, when many workers are covered by collective agreements although they are not members of a union (such as in France where the two figures stand at around 90 percent and 10 percent), estimates based on the membership markup underestimate the “true” markup, and it is preferable to use the recognition markup to measure the impact of unions on wages.

24. In all countries where the wage markup has been estimated, it has been found to be nonnegative (that is, it is at times found to be statistically zero). There are, however, significant cross-country variations as well as variations of estimates within countries and over time. There is also some evidence, albeit weak, that the wage markup is, on average, lower in high-income countries than in low- and middle-income ones.

25. The most reliable picture comes from the United States and the United Kingdom by virtue of the many studies that have been carried out and the broad consistency of the results. The U.S. wage markup has been estimated in more than 200 studies and is generally found to range from 12 to 22 percent. Though there is consensus that the *average* markup is approximately 15 percent this may significantly overestimate the wage gain and that the true impact of unions on wages may be around or less than 10 percent. In the United Kingdom, more than 20 studies have estimated the markup to be in the range of 3 to 19 percent and the average is probably also around 10 percent.

26. The evidence is sparser for other industrialized economies, but some generalizations are possible. The conventional view is that the wage markup for Australia is in the range between 7 and 17 percent. Similarly, the Canadian wage markup has been estimated to be in the range of 8 to 25 percent, although decreasing over time reaching 7- 10 percent in more recent periods. In (West) Germany, where most unions are industry unions and work and pay conditions contained in collective agreements are largely extended to non-unionized workers, the wage markup is found to be small, especially for male workers. Similarly, studies on Japan have found a small average wage markup of about 5 percent.

27. The evidence is even more limited for low- and middle-income economies. In the Republic of Korea, estimates of the markup for male workers in manufacturing industries were found to be below 4 percent in 1988 but higher later on (7 percent in 1991). The union membership wage markup in South Africa is among the highest (around 24 percent for black blue-collar workers) as is also for Malaysia (in the range of 15 to 20 percent depending on the type of union involved) and both countries can be thought of having large segments of the labor market who, in the absence of minimum wages, would have been quite vulnerable. For Mexico, the mark up is found to be around 10 percent but for Ghana it rises to more than 20 percent.

28. Some studies have estimated the membership wage markup in a cross-country context. They generally confirm that the markup is positive but often not significant (for example, in countries such as Canada, Israel, the Netherlands, Spain, and Switzerland).

29. The markup can vary depending on the percentage of wage- and salary-earners that are unionized or covered by collective agreements. While union density per se appears to be largely unrelated to the wage markup, bargaining coverage is negatively correlated with the markup. In other words, when more workers are covered by collective agreements, the smaller, other things being equal, the wage markup appears to be. This suggests that the more workers become unionized or are covered by collective agreements, the lower is the markup that they can secure. This may be the case because the labor supply in the non-covered sector decreases when more workers become covered, pushing the nonunion wage up. Taking this argument one step further, one may say that unions are able to secure a high markup only where the marginal cost to society (in terms of impact on the macro economy) is small. In effect, unions are ultimately constrained by the wage share in the total economy: they can have wide coverage and a small markup or a high markup at the cost of coverage.

30. An interesting additional question is whether the markup is stable over time or it fluctuates with economic conditions. This question has been investigated in only two countries—the United States and the United Kingdom. The conclusion is that the wage markup in the United States has moved procyclically but does not have a trend over the period 1983–95. For the UK the markup has declined a bit during the 1980s probably due to a fall in the wage markup for female workers. These results suggest that union power has not been curtailed significantly, despite the reduction in union density observed over the same period in the two countries.

#### *The Efficiency Cost of the Wage Markup*

31. When unions are successful in getting a wage markup, workers tend to be displaced from the unionized sectors to nonunion sectors. This creates a deadweight loss. A number of studies have estimated this deadweight loss and found it, somewhat surprisingly, to be quite small. For the US estimates of the welfare loss is found to be less than 0.5 percent of GDP (that is less than one percentage point). The simulated welfare loss associated with a 25 percent union/nonunion wage markup is similarly found to be no larger than 0.2 percent of GDP. Interestingly, the U.S. results are similar to those for Australia, where the average markup is 7 to 17 percent and where 80 percent of the work force is covered by collective agreements (compared to 15 percent in the US).

#### *The Difference in the Markup for Women and Men*

32. Unions are just one of many determinants of the gender wage gap. The gender wage gap is the percentage difference between the wage of a female worker and a male worker who otherwise have the same personal and workplace characteristics. The effect of unions arises in three ways: first, from different unionization rates among men and women; second, from the ability of unions to influence wages in some sectors or workplaces but not in others; and third, from differences in the wage markup for men and women. In principle, the net effect of unions upon female wages relative to male wages is uncertain: though a higher wage markup for women than for men can reduce the gender wage gap, it can also decrease the wages of non-unionized women to such an extent that the gender wage gap actually increases.

33. In the U.S. literature, there is very little, if any, difference between the markup for female and male workers. The same result emerges from Australian studies though most studies in

Britain show that the impact of unions on women's wages is greater than that on men's wages: A typical estimate is that the markup for women is 4 to 6 percentage points larger than that for men though a few studies find the opposite result. In any case, taking into account the fact that women workers are less likely to be unionized than men workers, the net effect on the average gender wage gap is likely to be small. Evidence from other OECD and middle-income countries unambiguously supports the view that the wage markup is greater for women (for example, in Canada, Japan, West Germany, and Mexico).

### *Differences in the Markup by Ethnic Group*

34. Discrimination among workers with different ethnic backgrounds but otherwise similar productivity characteristics can lead to a wage differential. In the United States, it is not clear whether there is a substantial difference between the wage markup for white and nonwhite workers. Some studies fail to find any difference, whereas others find that the markup is 5 to 10 percentage points higher for blacks than for whites. In the United Kingdom, the sparse available evidence shows that a nonwhite unionized worker gets a higher markup than a similar white worker.

### *The Private versus the Public Sector*

35. It is unclear if public sector workers are in a weaker position than private sector workers to exert wage pressure. Historically, they have been restricted from forming unions in many industrial countries. Even when public sector unions are legal, they are often legally barred from striking. This suggests that the average wage markup in the public sector may be smaller than the corresponding markup in the private sector. On the other hand, public goods and publicly provided private goods are produced in an environment with no or little competition. Moreover, producers in the public sector are not motivated by a profit concern; rather, they have a politically imposed budget constraint. The lack of competitive pressure and soft budget constraints makes it easier to pass the costs of high wages and overstaffing on to taxpayers. Finally, public sector unions may be able to influence employers' behavior through the political process. In many developing countries, unionization is concentrated in the public sector, and there are few legal constraints on the kind of behavior that these unions may engage in. In such an environment, unions are able to exercise substantial political pressure. This may contribute significantly to the rent-seeking cost of unions in addition to the impact it may have on the wage markup.

36. There is a number of specific problems associated with estimating the public sector wage markup. First, in the private sector, wage and working conditions of unionized workers are determined by a union-negotiated contract, whereas nonunion workers are typically excluded from the benefits of the union contract. In the public sector where the "wage-comparability" criterion is extensively used, it is not uncommon for both union and nonunion workers to get the same wage and working conditions. This makes it more difficult to classify workers according to how their wage is being determined and makes it preferable to use the recognition markup rather than a membership markup. Second, the work force mix differs between the private and public sectors. For example, the work force in the public sector generally consists of a disproportionately large share of white-collar workers. Since the markup for white-collar workers tends to be smaller than that for blue-collar workers, failing to take the work force mix into account can underestimate the markup in the public sector. Third, workers in the two sectors receive different amounts of fringe benefits.

37. There are more than 75 U.S. studies that have estimated the wage markup for the public sector at large or for some specific groups of workers within the public sector (such as teachers).



The conclusion here is that the public-sector gap averages about 8 to 10 percent. Within the US public sector, the wage markup is lowest for federal employees and highest for employees of local governments. In fact, the average markup for workers employed by local governments is slightly higher than the economy-wide average. The difference in the wage markup for workers in the public and private sectors in the United Kingdom is smaller for both manual and non-manual workers in the public sector than in the private sector. Other studies, including for Canada, conclude that the wage markup in the private and public sectors is very similar or that the difference is small, about 2 percentage points in favor of the private sector.

### ***The Markup for Workers with Different Skills***

38. In both the United States and the United Kingdom, manual workers get a larger markup than non-manual workers. Likewise, semiskilled workers get a larger markup than skilled workers. Similar results have been obtained in Canada while in other countries (such as in South Africa) the wage markup for workers with different skills varies between different ethnic groups.

### ***Unions, Wage Dispersion, and the Return to Schooling***

39. The wage mark-up for unionized workers and concentration of unionization among low-paid workers suggest that unions reduce the wage dispersion *across* an economy. Moreover, the impact of unions on the wage dispersion *within* the unionized sector can also contribute to low overall wage dispersion. For example, the differences between the wage mark-up for different skill groups (see above) indicate that unions contribute to the compression of wages within the unionized sectors of the economy.

40. There are many reasons why unions may be keen to promote a compressed wage scale across different groups of workers employed within the unionized sectors of the economy. One reason may be that they have egalitarian wage goals. Egalitarian wage goals can arise if productivity differs among union members and if the median member has low (compared to average) productivity. Under these circumstances, a democratic union tends to enter wage contracts that compress the wage structure. The evidence from different studies generally confirms that unions reduce wage dispersion significantly between industries, between (similar) firms within an industry, and among workers within a firm. In fact, the decline in unionization in the United Kingdom in the 1980s and early 1990s contributed significantly to the rise of wage inequality observed over the period. This suggests that unions play an important role in propping up wage levels at the bottom of the wage structure.

41. A side effect of the fact that unions tend to reduce the wage dispersion realates to the decisions people make about their children's and their own education. These decisions depend on a number of factors. One important factor is the return to education in terms of higher (future) wages. If unions reduce the return to schooling, say, by compressing the wage differential between workers with different skills, they can have an adverse impact on the formation of human capital. On the other hand, when the relative wage of unskilled workers increases, firms substitute away from unskilled workers. To avoid being unemployed, (unskilled) workers have to acquire more skills, so the compression of the wage distribution may induce more, rather than less, human capital formation. The empirical evidence suggests that the wage markup is usually higher for less educated workers or, in other words, the wage markup decreases as the education level of workers increases.

### *The Economic Environment*

42. The economic realities facing firms can make it difficult for unions to get a high wage markup. Competitive pressure from both the product market and the nonunion labor market can be particularly effective in serving this role. A number of studies have investigated the effect of competitive pressure on the wage markup. Most of these studies use industry concentration (the small number of firms controlling most of the output in a given industry) as a proxy for a firm's market power.

43. In the United States, the majority of studies find a negative correlation between industry concentration and the wage markup in manufacturing industries. This is also the case in the United Kingdom though in Canada some of the evidence suggests that industry characteristics such as concentration, import penetration, and labor substitutability have little impact on the wage markup.

44. These results do not support the theoretical predictions. However, the relationship between monopoly power and the wage markup can be masked in these estimates if wages are high in concentrated industries even in the absence of unions. For example, this would be the case if firms in these industries wish to forestall unionization. Another reason is that firms in concentrated sectors would like to escape possible enforcement of competitive laws or they want to avoid the bad press associated with high profits and low wages. These reasons may be more apparent than real. For example, the fear of provoking the response of the competitive authorities is hypothetical in many countries where there is little faith in competition laws and little effort is spent on enforcing them. Also, firms may receive better press coverage by spending part of their excess profits on health and safety improvements in the workplace or by donating to charities rather than by paying higher wages. One interpretation of the evidence is that firms in concentrated industries use their monopoly rent to withstand the wage demands of unions. This may induce workers to be content with greater job security and other non-monetary benefits as a substitute for high wages. Finally, the industry concentration ratio may not be a good proxy for a firm's monopoly power in the product market.

45. This suspicion seems to be confirmed by a few studies that have used indicators other than industry concentration to measure the monopoly power of firms. These studies find that the wage markup is larger in firms with monopoly power than in those without it. For example, the use of a mixture of industry concentration ratios and a subjective measure of entry barriers to the industry as a proxy for monopoly power in a sample of unionized U.S. manufacturing firms suggested that the wage markup is significantly higher in noncompetitive industries than in competitive ones. In the UK the use of subjective indicators of competition (such as asking management of firms about the number of competitors that they are facing in the product market) suggests that competition in the product market significantly reduces the average wage markup. In particular, in firms that operate in a competitive product market, the wage markup is, on average, zero. On the other hand, firms that have little or no competition in the product market grant a wage markup in the range of 8 to 10 percent. Moreover, unions are unable to create a wage markup in firms that primarily operate in international markets. In short, unions are able to create a markup only in industries that are sheltered from foreign competition *and* the whole industry is heavily unionized.

### *The Design of Collective Bargaining*

46. The evidence generally suggests that workers, on average, get a wage markup if they are members of a union or otherwise have their pay conditions determined by collective agreements.

However, the size of the markup may depend on how collective bargaining is organized. The institutional framework can be organized in four groups:

- The extent of unionism (average union density in the industry or the percentage of firms in the industry that recognizes a union).
- The level at which bargaining takes place (the firm, industry, or the national level).
- Multi-unionism (when more than one union represents similar workers in the same workplace).
- Closed shops (a worker can obtain or retain a particular job only if he or she is a member of a particular union).

47. **The extent of unionism.** There seems to be a strong relationship between the extent of unionism in an industry (or occupation) and the wage markup. In industries where unionization is low in terms of either density or the percentage of firms that recognize a union, unions generally have little impact on wages. This is because attempts to raise the wages paid by a few unionized employers (above what their competitors pay) put union employers at a severe disadvantage in the product market. This increases employers' resistance to union wage pressure and encourages the union to moderate its wage demands. On the other hand, in industries where almost all firms are unionized, unions will have more bargaining power and will therefore be able to secure a higher wage markup. This is known as the "extent of unionism" effect and in the US increases the membership markup, although there is substantial disagreement about the magnitude of this effect. A few studies for Canada confirm the positive effect. In the UK the wage markup is larger in industries with more than the 70 percent threshold for union density.

48. In the United States, there is no significant difference between union density and coverage of collective agreements (both come to about 15 percent of the workforce). In the United Kingdom, on the other hand, a large number of workers have their pay conditions determined by collective agreements without actually being members of a union. Therefore, focusing on the membership wage markup may bias not only the estimate of the wage markup itself but also the estimate of the extent of the unionism effect. More recent British studies take this into account and analyze the relationship between the recognition wage markup and union density at the establishment level. The recognition wage markup (for semiskilled manual workers) is significant only for firms where more than 95 percent of the work force is unionized: The markup is in the range of 7 to 10 percent. In firms where a smaller fraction of semiskilled workers are union members, the wage markup is insignificant. This suggests that workers in a workplace where management does recognize a union benefit in terms of higher wages only if almost all the workers in the workplace are actually organized in unions

49. **The level at which collective bargaining takes place.** The level at which collective bargaining takes place affects how workers and employers interact, and this has implications for the size of the wage markup. One would expect the wage markup to be higher when collective bargaining is at the industry level rather than at the firm level. This prediction fails to be supported by evidence for the UK. In fact, some studies find that the biggest gains in the wage markup arise when collective agreements are fixed at the local level rather than at the national level. However, for the US, some early studies found that the wage markup was higher in industries that used centralized bargaining than in industries that used firm-level bargaining.

50. In Malaysia, the average wage markup paid by a firm that deals with an industrial union is 20 percent, compared to 15 percent in firms that deal with a company union. In India, members of independent plant-based unions (unions run and managed by workers employed in the plant)

get significantly higher wages and bonuses than workers affiliated with external unions (unions that are explicitly affiliated with a trade union federation).

51. **Multi-unionism.** The prime source of information on the effect of multi-unionism is the United Kingdom where multi-unionism plays an important role. In the 1980s, about 30 percent of all unionized plants in the private sector recognized more than one union for collective bargaining purposes. The 1998 Workplace Employee Relations Survey reports that still about 38 percent of all workplaces have multiple unions. Under multi-unionism, the unions may bargain together (multiple bargaining) or separately (separate bargaining) with management. Multi-unionism is generally associated with a higher wage markup. Some studies have refined this result and show that it is not multi-unionism *per se* that is associated with the additional wage markup: *it is the combination of multi-unionism and separate collective bargaining that produces the additional wage markup*. If all the unions that represent workers at a given workplace bargain together, then the wage markup is no larger than in firms where workers (of the same type) are represented by a single union.

52. **Closed shops.** A closed shop exists when an employee can obtain or retain a particular job only if he or she is a member of a particular union. The closed shop can be either pre- or post-entry. A pre-entry closed shop requires that the employee is accepted as a member of the relevant union (“holds a union card”) *before* he or she can be employed in the particular trade. Historically, craft unions have managed to run a pre-entry closed shop. One example is the International Typographical Union in the United States, which at its peak required that all individuals hired for the composing room must already have union cards. A post-entry closed shop requires that the employee joins the union upon getting a specific job. In the United Kingdom, post-entry closed shops used to be important in industries such as metal engineering, transport, and communications with 23 percent of their workers being covered by a closed shop arrangement of all workplaces in 1980 (and 88 percent in nationalized industries). But the importance of such arrangements has declined significantly over time: By 1998 merely 2 percent of all workplaces had a closed shop arrangement. From a theoretical point of view, a closed shop increases a union’s control over labor supply and as a result its bargaining power. The question, therefore, is whether the presence of a closed shop increases the wage markup over and above the basic recognition or membership effect. Post-entry closed shop does not increase the wage markup above what it would have been had the majority of the firm’s workers been unionized. On the other hand, pre-entry closed shops can increase the wage markup by as much as 100 percent. However, subsequent research finds that the premium associated with the pre-entry closed shop has been reduced and is roughly the same as that found in firms where management recommends union membership.

### *Unions and Employment*

53. The wage markup reduces total employment as long as the demand curve of labor in the unionized sector of the economy is sloping downward and the management of unionized firms retains the right to manage (that is, management independently decides on employment after wages have been agreed with the union). However, the adverse employment effect of an increase in wages can be reduced and even be reversed if (a) unions and firms bargain over wages *and* employment and agree on what is called “efficient contracts” or (b) firms have monopsony power in the absence of collective bargaining. Some empirical evidence on whether unions and firms bargain over employment suggests that this is rarely the case in either the United Kingdom or the United States. In the United States, many contracts explicitly state that the right to determine employment remains with the management. While this is not true in the United Kingdom, U.K. unions do not generally bargain over employment.

54. However, although the employment level *per se* is not subject to formal bargaining, recruitment, staffing norms, redundancy pay, and deployment can be included in formal bargaining, and this can have indirect effects on employment. It is possible to test econometrically the *right to manage model* (unions push up wages and reduce employment) against the *efficient bargaining model* (unions push up wages and employment). The results often reject both models and one is tempted to conclude that “on the whole neither theory seems to be able to account satisfactorily for the data on negotiated wages and their associated employment levels.” Although it is tempting to argue that the truth should lie somewhere in the middle, the clear answer may be constrained by data limitations and flawed econometric procedures.

55. Another way to assess the impact of unions on employment is to look at employment growth noting that permanent employment growth differences between unionized and non-unionized firms are unlikely to represent *long-run* equilibrium positions. With this in mind, the available evidence from Canada, Jamaica, Malaysia, the United Kingdom, and the United States suggests that employment grows more slowly in unionized firms than in non-unionized ones. Studies from Canada, the United Kingdom, and the United States typically find a growth differential in the range of 3 to 5 percentage points per year in favor of non-unionized firms. There are a number of possible explanations for the observed employment growth differential:

- It takes time and effort to organize a union. Consequently, at a given point in time, old firms are more likely to be covered by unions than newer firms are. If newer firms expand faster than old firms, we would expect to observe higher employment growth in the newer, non-unionized firms.
- Unions are more likely to be concentrated in sectors that enjoy large rents. If these sectors are less dynamic because of monopoly inefficiencies and their activities are limited by the size of the domestic market, employment would tend to grow more slowly in these sectors.
- Unions may encourage labor hoarding by increasing hiring and firing costs. This would make unionized firms more reluctant to hire new workers during a boom, thus reducing employment growth over the cycle.
- Labor costs may grow faster in unionized firms than in non-unionized ones.
- Productivity grows slower in unionized firms than in non-unionized ones.

#### ***Voluntary Turnover, Layoffs, and Job Tenure***

56. The evidence from Australia, Malaysia, the Republic of Korea, the United Kingdom, and the United States unanimously shows that voluntary turnover (measured by the “quit” rate) is lower and job tenure is longer in unionized firms than in non-unionized ones. Perhaps the most convincing recent evidence that unions reduce job separations comes from Japan: the job separation rate is significantly lower in unionized firms than in non-unionized ones. Importantly, the Japanese experience has been attributed to mechanisms that provide “voice” for the employees and reduce separations in unionized firms only. All this gives support to the “collective voice” view of unions and points to one of the key channels through which unions can add to workplace productivity, namely by increasing the length of job tenure.

57. The welfare gain associated with a reduction in labor turnover has been found to be equivalent to a 0.2 to 0.3 percent increase in GDP in the United States in the 1980s. For unionized firms, the gain is estimated to be equivalent to a 1 to 2 percent reduction in costs. While these estimates are usually crude, it is interesting to notice that the welfare gain associated with participatory benefits of this kind is of the same order of magnitude as the estimated monopoly

cost of unions. However, the participatory benefit accrues to organized workers (and firms) only, whereas the monopoly cost of unions is borne by society at large.

58. While voluntary turnover tends to be lower in unionized firms than elsewhere, unions may increase the use of layoffs, particularly temporary layoffs. In an early study of layoff patterns in U.S. manufacturing firms in the 1960s and 1970s, unions were found to significantly alter the firm's choice between layoffs, wages, and hours worked in response to business cycle fluctuations. Unionized firms adjust by making temporary layoffs rather than by reducing weekly hours (work sharing) or wages. In particular, unionized (blue-collar) workers are much more likely to be laid off temporarily than non-unionized workers. One explanation for this may be the fact that junior workers can be laid off more easily. Also, senior workers typically have more influence on the union's policy than junior workers. Faced with the choice between a reduction in their earnings or a temporary layoff of junior workers, unions are likely to prefer layoffs. Another explanation is that the cost of temporary layoffs can be shifted onto the unemployment benefit system. As long as there is less than a 100 percent experience rating (in other words, as long as the amount that firms contribute to unemployment benefits is less than the costs of the unemployment that they generate), those firms with above-average layoffs are subsidized at the expense of firms with below-average layoffs. However, while it is true that the existence of unions increases layoffs in the private sector, the opposite is true in the public sector. Public sector unions do not increase the wages of their members as much as private sector unions do. Instead, they reduce layoffs and protect employment.

#### *Unions and Hours Worked*

59. The effect of unions on the total number of hours worked by their members (compared to non-unionized workers) is not a priori clear. On the one hand, unions typically demand lower normal hours, more holidays, and so on. Conversely, they may be able to secure overtime work at higher rates of pay.

60. Overall, the finding is that unions reduce the total number of hours worked. In particular, the evidence suggests that workers in unionized firms work fewer normal hours. Moreover, unions reduce the number of unpaid overtime hours and, in some cases, increase the amount of paid overtime work. Furthermore, unions increase the likelihood that workers receive paid holidays and unionized workers get, on average, additional weeks of holidays compared to non-unionized workers. While these results are relatively robust and the union/nonunion total hours differential for in OECD countries is negative, union workers seem to work more in Spain and Switzerland. The estimates range from a one- to two-hour differential per week in the United States and the United Kingdom to a four- to six-hour differential per week in Austria and Ireland.

#### *Unions and Profitability*

61. It is a commonly held view that unions reduce the profitability of firms because they appropriate part of the rent that would otherwise have been available to shareholders. The fact that unions are able to get a wage markup supports this view. However, it is unwise to deduce the effect of unions on profitability by looking at the wage markup alone. This is because the union's ability to extract rent from a firm depends on the bargaining power of the union *and* on the size of the rent. The bargaining power and the size of the rent in turn depend on a mixture of factors, including the structure of collective bargaining, the structure of the product market, the production technology used, and so on. In addition, by improving morale and job satisfaction among workers and by facilitating worker-employer cooperation, unions can contribute positively

to profitability. Therefore, instead of trying to capture a given rent, unions may help to create profits from which they can achieve wage gains.

62. A large number of studies have estimated the impact of unions on profitability. These studies use a number of different measures of profitability such as price/cost margins, net (of wages) return to capital, Tobin's  $q$  (the market value of the firm relative to the replacement costs of the firm's assets), and subjective profitability judgments by management. Such studies estimate the union impact using industry, firm, or stock market data. The empirical evidence from the 1980s and early 1990s is clear: most studies find that financial performance as measured by the indicators mentioned above is better in nonunion than in union workplaces and firms. The impact tends to be larger in industries or firms that have some monopoly power in the product market. Some of the evidence suggests that the unions' share of monopoly profits may be as large as between 47 and 77 percent. While these figures may not be very representative, they do show that under specific circumstances unions are able to appropriate a substantial share of monopoly profits.

63. While a few studies for the UK find that unions have no impact on profitability, the generally accepted view is that unions have a significant negative impact on profitability in British manufacturing firms. In Japan unions were found to reduce the rate of return on equity by 20 to 25 percent. The ratio of profits to sales is reduced by about 40 percent. This is confirmed when profits are measured in comparison to labor's share of income: Union presence is associated with a higher fraction of income going to workers. Likewise, the unionization of firms in the Republic of Korea has a negative, but statistically insignificant, impact on operating profits.

64. While all this evidence point in the same direction, the wind may be changing: some studies looking at the late 1990s in the United States and United Kingdom find that unions can have positive effects on profits. The most striking study is one which looks at 464 entrepreneurial firms in the United States at the time of their initial offering in 1993 and follows their subsequent financial performance. The study finds that union presence is associated with better financial performance. It argues that this surprising result can be due to a number of factors that have affected the impact of unions on profitability in this cohort of "new" firms coming into maturity in the mid 1990s. These include more intense product market competition, a lower degree of labor-management conflict, the adaptation of high performance work systems, and a general fall in union power.

65. These themes are also found in the most recent vintage of British studies that does not find evidence of a negative relationship between subjective performance measures and unionization using data from the latest British Workplace Employment Relations Survey. These results have been confirmed in a number of other studies. On balance, the evidence therefore supports the notion that the negative influence of unions on profits identified in the 1980s has diminished in the 1990s.

66. However, important differences still exist. First, multi-unionism (but not union recognition as such) is associated with lower (self-reported) firm profitability in the United Kingdom. A similar result is found in a study of Australian workplaces. Second, it is mainly those unionized firms that face little product market competition that are adversely affected by union presence. This suggests that unions mainly share supernormal profits rather than cut into normal profits.

67. In conclusion, it seems that unions do have a negative impact on firms' financial performance, but that product market competition and/or development of better and more effective labor-manager practices can reduce and perhaps even eliminate this negative effect.

### ***Productivity Differentials***

68. Unions can contribute positively to labor productivity by improving work morale, facilitating cooperation with management, reducing grievances (through their "collective voice" function), and so on. These participatory benefits can, however, be countered if management's ability to adjust to changing economic circumstances is reduced, for example, when unions impose restrictive practices (such as overstaffing or guaranteed overtime). Moreover, one would expect that the positive "collective voice" effects be more pronounced in countries like Japan and Germany where industrial relations are based more on cooperation through works councils and enterprise unions. Multi-unionism and other adversarial industrial relations practices of the type that used to be more common in the United Kingdom and Australia can result in negative effects. Likewise, one would expect that more intense product market competition induces unions and management to move towards industrial relations systems which would enhance the positive effects of unions and reduce the negative ones. Thus, it is not clear from theoretical considerations how unions will affect productivity of firms, and it would seem that the nature of industrial relations matters a lot.

69. The union/nonunion productivity differential is typically estimated econometrically from a *production function model*. Productivity, defined either as labor productivity or total factor productivity, is explained by the input mix (employment, capital, and hours worked), a vector of observed firm and industry characteristics (for example, industry concentration), a union dummy variable, and other control variables (such as business cycle indicators or the level of union coverage in the industry). The production function approach is problematic for a number of reasons. First, measured productivity in unionized firms can be higher than in non-unionized firms without implying that unionized firms are more efficient. This is because the wage markup, other things being equal, reduces employment in unionized firms. As a consequence, the marginal product of labor would be higher in unionized firms than in non-unionized ones. Second, unionized firms are likely to change their input mix in response to the wage markup. Hence, the input mix cannot be considered an exogenous determinant of productivity, and a simultaneity bias can develop. A third problem arises because management's role is largely ignored. Since the interaction between management and unions affects productivity levels, lack of knowledge of what management does can give a biased view of the impact of unions. This problem is more generally related to unobserved heterogeneity and can best be dealt with by estimating productivity *growth* models instead of productivity *level* models. An alternative to the production function approach is to use subjective measures of productivity. This is done in a number of recent studies from the United Kingdom, Japan, and Australia where management was asked to assess their establishment's labor productivity performance relative to other establishments in the same industry. The answers range from "a lot below average", "below average", "about average", "better than average", and "a lot better than average." It is clear that this approach is also problematic and one can question if managers have the required information to make reliable estimates of relative performance.

70. With these methodological issues in mind, we now review studies that estimate the productivity level and growth differential. We start with the evidence related to the productivity level differential.



71. **The productivity level differential.** Evidence on union productivity level differentials derives mainly from United States, United Kingdom, Germany, Japan, Australia, and Canada. The pattern of results is not clear-cut and the average differentials hides a lot of important variation.

72. For the US the conclusion is a qualified one, as there is considerable variation across studies. For example, in those industries in which firms are subject to substantial product market competition, unionized firms tend to have higher productivity levels than non-unionized ones. The quality of industrial relations is also important. The “quality” of industrial relations can be proxied by the number of grievances filed, the number of unresolved grievances, the number of strikes and quits, and the use of long-term collective agreements. Firms with high-quality industrial relations are associated with higher productivity levels and higher product quality than firms with low-quality industrial relations. On the other hand, the significantly higher absenteeism among union workers than among nonunion workers can have a negative impact on productivity; some studies find that absenteeism is 30 percent higher among unionized workers than among non-unionized ones. There is some evidence that unionized establishments that have adopted industrial relations practices that promote joint decision making coupled with incentive-based compensation have higher productivity than similar non-union plant. In contrast, those establishments that are unionized but maintain traditional labor management relations have lower productivity. This strongly suggests that unions have positive productivity effects only when industrial relations are “good.”

73. The evidence from the United Kingdom is more mixed, although some patterns can be identified. British unions appear to have a negative impact on the level of productivity. However, this conclusion is far from robust, and the average estimates hide a lot of variation. First, it is noteworthy that the results are also affected by how unionism is measured. For example, those studies that use union density as an indicator of unionism find a negative productivity effect. However, studies that use strikes as an indicator tend to find positive or insignificant effects. This suggests that the adverse impact of unions on the productivity level is not due to industrial conflict.

74. Second, the productivity effect of unions varies over time. British unions had no impact on productivity levels before 1979, but in the Thatcher era in the early 1980s, unions appear to have had a negative impact on productivity. More recent studies using the subjective productivity measure from the 1998 British Workplace Employee Relations Survey show that by the end of the 1990s, unionism *per se* is no longer associated with poor productivity performance. The negative impact persists only in those establishments with multi-unionism *and* separate bargaining, i.e., the practice where many different unions compete to organize employees in the same establishment *and* bargain separately with the management. Establishments with either a single union or multiple unions that bargain together are as likely as those without any unions to report that productivity is better than average. The state of industrial relations is just one among many “environment” variables that affect the relationship between unionism and productivity.

75. Also, as mentioned earlier, product market competition is an important factor. In particular, unionization is found to have a small negative impact on productivity on average, but this effect is driven by the non-competitive sectors of the economy. Importantly, the relevant estimates suggest that, when there are only few competitors in the product market, the probability of reporting being above the industry average is 14% lower for a unionized workplace than for one without unions, but when there are more than six competitors the difference is insignificant.

76. In Japan, unions are enterprise based and concentrated in larger firms, and the attitude of Japanese unions is often viewed as cooperative with management. Hence, Japanese unions seem like an obvious place to look for the “collective voice” effect of unions. Nevertheless, empirical studies from Japan find that unions have mixed effects on productivity. Some note that unions had a positive impact on productivity levels in the 1970s when technology and labor-quality variables are held constant, while others find that productivity in unionized firms was 15 percent lower than in similar non-unionized firms. The latter finding is confirmed when subjective productivity measures are used that ask managers to rank the productivity performance of their firm relative to other firms in the same industry. However, the presence of full-time union officials in the workplace is also found to have a positive impact of productivity. This suggests that such officials can assist management with implementation of procedures that enhance workplace efficiency. Other studies provide further evidence on the impact of unions in Japan based on objective productivity measures (value added per worker) in a sample of more than 400 listed manufacturing firms in the 1990s: While unions have a *ceteris paribus* negative impact on productivity, it is interesting to notice that this effect is mitigated by the fact that workers in unionized firms have longer tenure. By reducing job separation, unions appear to encourage cooperative behavior that raises employees’ work incentive and skill formation. Overall, the evidence probably suggests that Japanese unions have an indirect positive impact productivity.

77. In Germany, unions appear to have a negative, but quantitatively small impact on productivity. This may be related to the fact that German workplaces have works councils that provide the collective voice function of unions, even in non-unionized firms. The evidence on the impact of works councils suggests that such councils have a positive impact on productivity but only for larger firms. A similar result is found in the Republic of Korea where unions seem to have no impact on labor productivity in manufacturing firms, while the presence of mandatory works councils has a positive impact. In Australia and Canada the limited evidence available has found a negative effect of unions on productivity.

78. Malaysia is the only middle-income economy for which evidence on productivity (level) differentials is available. One study uses the value of total sales relative to the total work force to proxy productivity. It finds that unionized firms have higher productivity levels than non-unionized firms and that the positive productivity differential is primarily associated with industrial rather than company unions. While the study argues that this is *prima facie* evidence that unions have been associated with dynamic efficiency effects in Malaysia, it is somewhat puzzling why the strongest productivity effects are associated with industrial unions. Although industrial unions typically have shop-level facilities, one would expect that company-based unions would be just as good and perhaps in even a better position than industry-based unions to provide a “voice” and other efficiency-enhancing services

79. **The productivity growth differential.** The U.S. evidence on the union/nonunion productivity growth differential from the 1980s and the early 1990s suggests that while unions decrease productivity growth in some cases there is no significant difference between unionized and non-unionized firms in others. And while the available evidence indicates that British unions may have had a negative impact on productivity level in the 1980s, the evidence regarding productivity growth is mixed. Some studies, for example, suggest that unionized firms have higher productivity growth than non-unionized firms during the period the 1970s and early 1980s. Then, many firms derecognized unions and repudiated closed shop arrangements, and differences between productivity growth in unionized and non-unionized firms disappeared between 1984 and 1987. Firms that experienced a change in union arrangements in the late 1980s had higher productivity growth than both unionized firms with constant union arrangements and non-unionized firms. These results indicate that the weakening of British unions is one factor that

explains the high productivity growth in the 1980s in the United Kingdom. In a country comparative context a study of 19 OECD countries for the period 1950–80 concluded that union density does not have a statistically significant impact on productivity growth.

80. In evaluating these effects it should be kept in mind that it is highly unlikely that permanent productivity differences between union and nonunion workplaces can exist. If they did, it would imply that the gap between the two types of workplaces would be ever expanding. Thus, the productivity differentials observed in particular for the 1980s can best be thought of as short term effects that cannot be readily extrapolated into the far future.

### ***Unions and Implementation of New Technology***

81. Unions' attitude toward new technology (for example, computers and new machinery) is unclear. On the one hand, unions may resist technological changes because they fear immediate short-run employment losses. On the other hand, they may take a long-run view and welcome new technology that increases productivity and the prospect for future increases in wages.

82. The available empirical evidence suggests that new technology is adopted as fast in unionized firms as in non-unionized ones and that unions have little impact on technological innovation in firms. Studies of unions and technological change in the United States, the United Kingdom, and Canada in the 1980s indicate that unions "have no effect on firms' use of advanced manufacturing and microelectronic technologies" and that "in most cases unions welcome technological modernization; sometimes encouraging it, most often accepting it, infrequently opposing it but usually seeking to protect their members". A similar conclusion on the impact of unions on technological change is reached for Canada though unions do have an impact on the way in which technological change is implemented.<sup>85</sup> In particular, unionized firms are more likely to introduce technological changes than non-unionized firms for cost-cutting or production control reasons. In the UK unions are found to have a small positive impact on the introduction of new microelectronic equipment in U.K. firms in the mid-1980s.

### ***Unions, Physical Investments, and Research and Development***

83. The reviewed evidence on the wage markup and the effect of unions on profitability shows that unions share rents with firms. Besides the static impact on the functional distribution of income, this can have significant dynamic efficiency effects. These arise when firms realize that workers are going to appropriate part of the profits associated with investments in physical capital and research and development (R&D). Consequently, a unionized firm can be expected to invest less than a similar firm operating in a competitive labor market because of the resulting "hold-up problem".

84. This "rent-seeking" view of unions is in contrast to the more traditional view that holds that firms will substitute away from labor toward capital in response to an increase in the relative cost of labor. This will increase investment and so. It is not clear *a priori* how unions will effect investments in physical capital and R&D. The empirical evidence does however suggest that unions tend to reduce investment.

85. A number of studies have looked into the issue of under-investment by unionized firms, using firm- or industry-level data from the United States and the United Kingdom. They find that unionization has a negative impact on investment in physical capital. For example, in the UK,

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<sup>85</sup> Betcherman, 1991.

holding wages and productivity constant, the rate of investment in firms that recognize a union and have an average union density is, on average, 23 percent lower than in other firms. However, the impact is reduced as union density is increased. In the US unionization is found to reduce investment in physical capital by about 20% in a typical firm (in the 1970s). A more recent study from Canada finds similar results. In Germany, on the other hand, the impact of unions on investments has been found to be negative but somewhat smaller than in North America and Britain.

86. Likewise, the available evidence suggests that unionization can reduce spending on R&D: firm-level innovations in unionized British manufacturing firms are associated with higher wages for up to seven years. This suggests that unions do share in the surplus from innovation and may explain why the spending on R&D is lower in unionized firms than in non-unionized ones. Overall, North American and German evidence suggests that unionization reduces investment by around one fifth compared to the investment rate in a non-union workplace. Importantly, in both Canada and the USA this effect is felt at even low levels of unionization. The UK evidence is mixed: union recognition depresses investments but the adverse effect is off-set as density rises. IN constast, in Japan union recognition seem to go hand-in-hand with greater capital intensity.

### ***Unions and Training***

87. Unions are likely to affect the amount and quality of training that employees receive in the workplace through a number of channels. First, unions might bargain over these issues with employers and demand that training takes place. Second, the fact that unions decrease turnover can have a positive impact on the amount of firm-specific human capital workers are willing to invest in. The empirical evidence from the United States on the relationship between training and unionism is mixed. Some studies find that the amount of work-related and on-the-job training that workers receive in unionized firms is higher in non-unionized ones. Others cannot find any differences with regard to specific program such as computer literacy, numeracy, and sales training.

88. In the United Kingdom, the evidence is rather clear-cut: unionized worker receive more training and benefit more from participating in such programs than non-unionized workers (as measured by post-training wages relative to pre-training wages). These effects can partly off-set the negative impact on investments in physical capital and R&D.

### ***Unions, Fringe Benefits, and Health and Safety Regulations***

89. Unions do significantly increase wages. While this can be interpreted as evidence that unionized workers earn substantial rents, some have argued that as much as two-fifths of the wage markup is compensation for an inflexible and employer-controlled work environment. In addition to their monthly paycheck, however, unionized workers may be concerned with other issues, such as bonuses, severance pay, health and safety regulations, and paid sick leave.

90. The evidence suggests that workers in unionized firms are more likely to receive these benefits than workers in non-unionized firms. Firms with unions are more likely to provide paid sick leave, retirement benefits, cheap loans, and transportation. Unions do increase the likelihood of improved health and safety measures in the United Kingdom. And in Japan unions increase the use of severance pay and the size of the yearly bonus.

91. Some of these benefits obviously contribute to increasing labor costs in general and turnover costs in particular. On the other hand, cheap loans, free transportation, paid sick leave, and safety regulations may improve worker motivation and pay off in terms of higher productivity. Moreover, to the extent that inadequate safety and health provisions generate a suboptimal allocation of labor, union-sponsored (as well as government-sponsored) safety and health regulations may increase not only individual worker's welfare but also aggregate welfare.

92. Some studies have considered the issue of disclosure of information in the context of the risk attributes of different jobs. Commodities produced in different sectors use production technologies that expose workers to different levels of physical risks, such as exposure to toxins and industrial accidents. Safety is desirable from the point of view of workers. Therefore, safety has an opportunity cost, and safer jobs pay a lower wage. In an unregulated labor market, workers may be unable to appreciate the dangers inherent in different jobs. As a consequence, firms would not be required to compensate workers fully for the hidden risks involved in their jobs. This would lead to an inefficient allocation of labor across sectors, with too many workers doing jobs that are too dangerous. A labor market reform that induces full disclosure of safety levels would remove this distortion. An estimate for the Mexican economy of the welfare effects of a labor market reform of this type found that the well-being of workers would increase by 0.5 percent of baseline GDP per year. Moreover, the real income of the owners of the firms would increase as well because the reform increases the demand for capital for risk-abatement purposes. The total gain is estimated to be 0.6 percent of baseline GDP per year. This is a substantial gain and is of the same order of magnitude as the estimated monopoly cost of unions.

#### ***Individual Performance Pay and Seniority***

93. Individual performance pay is much more prevalent among non-unionized firms in the United States than among unionized firms by as much as 16 to 23 percent. Similar results are found in Britain where the most significant difference between unionized and non-unionized firms is that individual performance is important in wage determination only in non-unionized firms. This can have an adverse effect on productivity if individual performance pay is used as an incentive to increase workers' efforts. However, there are counterarguments. For example, the fact that unions are able to reduce the use of individual performance pay could be seen as evidence that the presence of unions reduces the need for this control instrument. Seniority-based wages can be interpreted as an efficiency wage that is designed to motivate workers to stay with the same firm for a longer period of time. Therefore, unions can increase productivity by extending seniority-based systems to smaller firms.

#### ***Unions and Pensions***

94. Evidence from many countries shows that unions increase the likelihood that workers are enrolled in pension schemes. If union-sponsored pension plans do not replace private saving, national saving can increase. At the macroeconomic level, the implied reduction in the real interest rate will increase investment demand and may even have a (temporary) impact on economic growth.

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## **Macroeconomic Effects**

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95. The macroeconomic impact of collective bargaining is hard to disentangle from other determinants of economic performance. While the available evidence from comparative studies of

the OECD countries is fragile, two general features should be emphasized. First, the impact of collective bargaining on various aspects of macroeconomic performance depends on the economic, legal, and political environment in which collective bargaining takes place and can vary over time. Second, important complementarities exist between key aspects of the bargaining system. Therefore, the impact of individual aspects such as union density or centralization of bargaining cannot be assessed in isolation. It is the package of institutions and their capacity to propagate shocks that matters.

96. The impact of collective bargaining on macroeconomic performance has usually been assessed through comparative studies where the performance of countries with (very) different bargaining systems is systematically compared. Most studies look at the economic performance of the OECD countries during the period from 1960 till today and ask how the framework of collective bargaining affects a large number of macroeconomic performance indicators (such as unemployment and inflation) and labor market flexibility indicators (such as real wage flexibility) in an environment in which workers' rights can be taken as granted. It should be pointed out that this approach does not allow us to address the question of causality. At best cross country studies of this type can help us identify important correlations between measures of key aspects of labor market institutions and economic outcomes.

97. The importance of collective bargaining as opposed to other ways of organizing contracting in the labor market can be measured by union density (the proportion of workers who are union members) or bargaining coverage (the proportion of the work force that is covered by a collective agreement). With respect to these indicators of collective bargaining, the evidence suggests that:

1. Union density *per se* has a very weak association, or perhaps no association, with economic performance indicators such as the unemployment rate, inflation, the employment rate, real compensation growth, labor supply, adjustment speed to wage shocks, real wage flexibility, and labor and total factor productivity. There is, however, one significant exception: union density correlates negatively with labor earnings inequality and wage dispersion.

2. Bargaining coverage tends to be associated with higher real wage growth (with no impact on productivity growth), lower employment rates, higher unemployment rates, and higher inflation. As with union density, bargaining coverage correlates negatively with labor earnings inequality and wage dispersion.

98. Collective bargaining is potentially a powerful means to facilitate bargaining **coordination** irrespective of union density and bargaining coverage. Various types of coordination are shown in Table 1 and each can affect differently wage setting and other aspects of industrial relations (for example, working conditions, holidays and leave provisions and so on). Bargaining coordination is potentially an influential determinant of labor market and macroeconomic performance. For example, the Japanese system of wage setting is decentralized (firm-based) but coordinated in the sense that it follows company rules based on seniority (hence, they are transparent) rather than individual contracting. In this system, workers are not paid wages equal to their individual reservation wage (that is, the wage level below which the worker will not supply his or her labor), as would have been the case under individual contracting, but this difference does not necessarily affect efficiency adversely. The Netherlands and Germany also have coordinated systems through strong employer organizations, coordination among giant companies or across industries, and coordination among unions. In France the government provides coordination in the form of exercising control over critical sectors such as public services, utilities, and large nationalized industries. In Italy, there is informal employer

coordination (via the big firms and regional employers' associations) and between some union confederations. Finally, Sweden has a centralized employers' organization as well as centralized union confederations.

**Table 1**  
**Aspects of Bargaining Coordination**

A. Union centralization	The capacity of the national union confederation to influence wage levels/patterns across the economy.
B. Union concentration	Union concentration is high if "few" unions at the relevant level of bargaining are representing workers.
C. Employer centralization	The capacity of the national employers' confederation to influence wage levels/patterns across the economy.
D. Level of Bargaining	Collective bargaining takes place at different levels: the firm level, the industry level, and the regional/national level.
E. Informal coordination	1) Informal consultations at the industry, regional, or national level among unions and firms. 2) Pattern bargaining (an agreement in a dominant sector is mimicked by others).
F. Corporatism	A combination of 1) High union density and bargaining coverage and high degree of union and employer centralization/concentration and 2) Social partnership between national workers' and employers' organizations and government.
G. Other aspects	This include different types of dispute resolution procedures, the proportion of unionized workers employed in sectors that are subject to international competition, and union density.

99. The comparative literature focuses on two hypotheses about the relationship between bargaining coordination and economic performance. The first hypothesis postulates that coordinated collective bargaining leads to better economic outcomes compared to semi-coordinated collective bargaining, which, in turn, performs better than uncoordinated collective bargaining. The second hypothesis (the "hump" hypothesis) postulates that semi-coordinated collective bargaining leads to worse economic outcomes than both coordinated and uncoordinated collective bargaining.

100. The evidence suggests that bargaining coordination did have a beneficial impact on macroeconomic performance in the 1970s and 1980s, but the evidence is fragile and in the 1990s the impact seemed to have disappeared. More specifically, countries with highly coordinated collective bargaining tend to be associated with lower and less persistent unemployment, less earnings inequality and wage dispersion, and fewer and shorter strikes compared to countries with semi-coordinated (for example, industry-level bargaining) or uncoordinated (for example, firm-level bargaining or individual contracting) collective bargaining.

101. In terms of productivity growth and real wage flexibility, countries with highly coordinated collective bargaining tend to perform slightly better than countries with semi-coordinated collective bargaining but may not perform differently than countries with uncoordinated collective bargaining. This lends some support to the first hypothesis but only for the 1970s and 1980s. For most economic indicators, the differences disappear in the 1990s. Two

exceptions are earnings inequality and wage dispersion. These indicators are comparatively low in countries with highly coordinated collective bargaining throughout the whole period.

102. Although countries with either uncoordinated or coordinated collective bargaining tend to be associated with lower and less persistent unemployment and higher productivity growth than semi-coordinated collective bargaining during the period 1960 to 1990, the evidence in favor of the hump hypothesis is, in general, very weak, particularly for the 1990s. In terms of inflation and the employment rate, there seems to be little difference between coordinated, semi-coordinated, and uncoordinated collective bargaining.

103. These conclusions refer to one dimension of industrial relations and take other dimensions as given (either by controlling for them or by inappropriately ignoring them). This ignores the possibility of complementarities between union density/bargaining coverage and bargaining coordination. Such complementarities are important for the impact of collective bargaining on economic performance, and it can therefore be misleading to focus on one particular aspect in isolation. However, one can make some generalizations though with a wide margin of error:

- High union density and bargaining coverage do not contribute to poor unemployment performance so long as they are complemented by high bargaining coordination (particularly among employers).
- Informal coordination of wage bargaining (informal consultations between firms and/or unions or pattern bargaining) tends to mitigate the potential disadvantage (in terms of relative high unemployment) associated with semi-coordinated (such as industry-level) wage bargaining, and can arise in countries with relatively low union density and bargaining coverage.
- Coordination among employers tends to be more important in producing low unemployment than coordination among employees. This suggests that employers' organizations are more effective in controlling wage drift than union confederations.
- Countries that have competing unions and many different union confederations (multi-unionism) tend to perform worse (in terms of unemployment and inflation) than other countries.
- The effects of coordination can be compromised or accentuated depending on the political orientation of the government. "Good" economic outcomes (in terms of economic growth) may arise either when strong, centralized unions are paired with a strong left-wing government or when weak, decentralized unions are paired with a right-wing government. A mismatch (weak unions paired with a strong left-wing government or strong unions paired with a right-wing government) can lead to poor economic outcomes.

104. These complications are further illuminated in Table 2 where an relatively obvious proposition (to most economists) is shown to have potential a number of negative externalities. The obvious proposition here is that more decentralized wage setting is likely to reflect better the conditions, needs and wishes of workers and employers in specific establishments. Notice that these are of course *potential* externalities and not ones that have been shown by the empirical literature to be present in all countries or at all times.



**Table 2**  
**Six Externalities Associated with Decentralized Wage Setting.**

The input price externality	Decentralized wage gains are passed on as higher product prices, thus increasing the real cost of inputs for other firms.
The fiscal externality	Decentralized wage gains lead to unemployment. The cost in terms of unemployment benefits is born by all tax-payers, not only those involved in wage setting.
The unemployment externality	Decentralized wage gains increase overall unemployment, making it more difficult for all unemployed workers to find a new job.
The envy externality	Decentralized wage gains create envy among other workers.
The consumer price externality	Decentralized wage gains are passed on as higher product prices, thus lowering the real wage of all workers.
Efficiency wage externality	At the decentralized level, firms have an incentive to try to increase the relative wage of their workers to increase their motivation.

105. The evidence summarized above focuses on the relationship between aspects of collective bargaining and specific economic outcomes and provides us with important information as to whether or not particular bargaining institutions are systematically associated with good economic outcomes. However, by essentially taking a static view of the nexus between collective bargaining and economic performance perhaps one of the most important benefits of bargaining coordination is ignored, namely the capacity of the bargaining system to help the economy to adjust to shocks in an effective way. In this regard, the empirical evidence suggests that bargaining coordination can reduce the adverse impact of economic shocks on unemployment levels.

106. This concludes the long list of specific macroeconomic findings. Although some patterns emerge, the evidence is generally too weak and fragile to warrant grand generalizations about the performance of specific labor market institutions. Instead, it suggests that the relationship between collective bargaining and economic performance cannot be fully understood unless the general economic and political environment in which bargaining takes place is taken into account. One should therefore be careful not to infer that institutional forms that work well in one environment would also work well in other—often very different—environments.

#### ***Bargaining Coordination and Monetary Policy***

107. The organization of collective bargaining can affect economic outcomes in ways other than through the direct impact on wages and employment. An important indirect link is the interaction between the bargaining structure and monetary policy. The establishment of the European Monetary Union and the move towards central bank independence in many OECD countries in the last 10 years have spurred an interest in this link. It is clear that under a regime of decentralized collective bargaining, unions are unlikely to take into account how wage settlements might affect monetary policy. However, when collective bargaining is coordinated, unions can act strategically and take into account how the central bank might react to different wage settlements. Broadly speaking, this can affect economic outcomes through two channels.

108. The first approach takes as its starting point the inflation bias in monetary policy when the central bank is tempted to print money to expand aggregate demand once the private sector

has locked itself into nominal wage contracts. If unions anticipate this, all attempts to reduce unemployment below the equilibrium level will fail and inflation will be sub-optimally high. Importantly, the higher the equilibrium level of unemployment is, the higher the inflation bias would be because this makes the temptation to create surprise inflation so much bigger. Now, under a regime of coordinated bargaining unions realize that their wage strategy affects the level of equilibrium unemployment and thus the size of the inflation bias. If unions care about inflation per se (independently of their concern for real wages and employment), they have an incentive to moderate their wage demands in order to reduce the equilibrium level of unemployment and the inflation bias. Thus, coordinate bargaining may lead to lower unemployment and inflation.

109. The second approach focuses on the interaction between the degree of bargaining coordination and the monetary policy regime. It is argued that equilibrium unemployment is lower, the fewer the number of unions and the more non-accommodating the monetary regime is. The logic is that unions might realize that their wage settlements will lead to a larger reduction in real demand when the central bank is committed to a fixed nominal money supply than when it is anticipated that the central bank will accommodate (by increasing the money supply) whatever wage settlement is reached in the labor market. Consequently, unions have an incentive to lower their wage demands when monetary policy is non-accommodating and this leads to high levels of (equilibrium) employment. This mechanism is not operating if collective bargaining is completely uncoordinated because in that case the price effect is too small to be internalized by the unions. Nor does the monetary regime matter, if bargaining is completely centralized or fully coordinated: in this case, the unions can coordinate their wage policies perfectly and choose full employment irrespectively of the monetary regime. Thus, the argument is that semi-coordinated collective bargaining combined with non-accommodating monetary policy is likely to lead to higher levels of employment than semi-coordinated bargaining with accommodating monetary policy. If true, this suggests that semi-coordinated collective bargaining is not associated with poor economic outcomes, as otherwise suggested by the reasoning behind the hump hypothesis.



