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**Employment diagnostic analysis:
Bosnia and Herzegovina**

Shagun Khare, Per Ronnas, Leyla Shamchiyeva

Employment
Sector

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Preface

The primary goal of the ILO is to contribute, with member States, to achieve full and productive employment and decent work for all, including women and young people, a goal embedded in the ILO Declaration 2008 on *Social Justice for a Fair Globalization, and*¹ which has now been widely adopted by the international community.

In order to support member States and the social partners to reach the goal, the ILO pursues a Decent Work Agenda which comprises four interrelated areas: Respect for fundamental worker's rights and international labour standards, employment promotion, social protection and social dialogue. Explanations of this integrated approach and related challenges are contained in a number of key documents: in those explaining and elaborating the concept of decent work², in the Employment Policy Convention, 1964 (No. 122), and in the Global Employment Agenda.

The Global Employment Agenda was developed by the ILO through tripartite consensus of its Governing Body's Employment and Social Policy Committee. Since its adoption in 2003 it has been further articulated and made more operational and today it constitutes the basic framework through which the ILO pursues the objective of placing employment at the centre of economic and social policies.³

The Employment Sector is fully engaged in the implementation of the Global Employment Agenda, and is doing so through a large range of technical support and capacity building activities, advisory services and policy research. As part of its research and publications programme, the Employment Sector promotes knowledge-generation around key policy issues and topics conforming to the core elements of the Global Employment Agenda and the Decent Work Agenda. The Sector's publications consist of books, monographs, working papers, employment reports and policy briefs.⁴

The *Employment Working Papers* series is designed to disseminate the main findings of research initiatives undertaken by the various departments and programmes of the Sector. The working papers are intended to encourage exchange of ideas and to stimulate debate. The views expressed are the responsibility of the author(s) and do not necessarily represent those of the ILO.

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¹ See http://www.ilo.org/public/english/bureau/dgo/download/dg_announce_en.pdf

² See the successive Reports of the Director-General to the International Labour Conference: *Decent work* (1999); *Reducing the decent work deficit: A global challenge* (2001); *Working out of poverty* (2003).

³ See <http://www.ilo.org/gea>. And in particular: *Implementing the Global Employment Agenda: Employment strategies in support of decent work*, "Vision" document, ILO, 2006.

⁴ See <http://www.ilo.org/employment>.

Foreword

Perhaps, for the work of the International Labour Organization (ILO), there isn't a country more appropriate than Bosnia and Herzegovina (BiH). It is a country in transition that emerged from a past of communist rule and a bloody conflict. Progress has been made, though not necessarily enough of it. Labour market issues remain: high inactivity and high unemployment. These dismal statistics are set against a backdrop of an ageing population and high outbound migration, one of the highest in Europe.

This present study by Shagun Khare, Per Ronnas and Leyla Shamchiyeva attempts to structure all the varied constraints faced by the country in its quest for a better life for its people via an employment diagnostic analysis. Initial findings of this analysis were used as an input in the revision of the National Employment Strategy 2010-2014 that was adopted in 2010. The two step methodology of employment diagnostic analysis, developed by Ronnas and his team at the International Labour Office, Geneva, results in an across-the-board analysis – but one that focuses mainly on key challenges to and opportunities for productive employment. The study is quite unique as it not only contains a thorough analysis of labour market and economic data, but also a synthesis of the views of the ILO's social partners – the participants in the real economy – the workers, the employers and the government.

It is, moreover, an exhaustive first analysis that paves way for more focused and targeted intervention. This work initiated in BiH over a year ago, has already led to further studies on issues that were brought out to be vital to productive employment generation in the country. A study, in collaboration with the Ministry of Civil Affairs and the Department of Economic Planning, is underway that deals with skills matching in the economy; while another study on gender issues, was undertaken by the Gender Bureau at the ILO. Linking economic planning with human resource development has been a priority in the country, and as I write this, a workshop in collaboration with the Ministry of Civil Affairs on the same is being organized in Sarajevo.

All these positive developments take stem from the comprehensive and definitive analysis of labour market issues contained in this volume. I congratulate the authors on this admirable work.

Duncan Campbell
Director for Policy Planning
Employment Sector

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1. Introduction⁵

Employment diagnostic analysis – the methodology

The present study offers an employment diagnostic analysis of Bosnia and Herzegovina (BiH). The overall objective is to understand the nature of the deficiency of productive employment in BiH and to identify the constraints and challenges, and opportunities for enhancing inclusive job-rich growth, with a view to provide a sound knowledge base for effective policies, institutional reforms and other interventions aimed at promoting productive employment.

The analysis was undertaken in two phases. The first phase aimed to provide an analysis of the setting and of contemporary patterns and dynamics of employment and economic development. The motivation for this part was to guide the subsequent analysis by arriving at an a priori understanding of the country-specific development context and employment situation; that was sufficiently comprehensive to permit a broad identification of hypotheses regarding the strengths and weaknesses of the economy and labour market, and of the likely challenges in terms of sustainable and inclusive job-rich growth. It contained an overview of three main areas and issues: (i) demographic and other given factors; (ii) the patterns and dynamics of employment, income, inequality and poverty, and (iii) the sector-specific growth, employment and productivity dynamics.

The second phase of the diagnostic analysis was structured according to an ‘employment diagnostic tree’ (see appendix A.1.). This diagnostic process may be seen as a funnel. It begins with a tour d’horizon of the ‘upper’ branches in the employment diagnostic tree to determine where the main constraints and challenges to enhancing productive employment are likely to be found. The analysis is subsequently pursued along three main branches: The level of human capital / employability; the opportunities for and returns to human capital / employment; and, sustainability issues. The analysis is carried out level by level, i.e. upper-level branches are explored before sub-branches.

This phase of the analysis was informed by the earlier analysis of development and employment dynamics in phase one. The knowledge gained at this stage facilitated an interpretation of the indicators attached to the various ‘branches’ in the employment tree and sped up the process of narrowing down and identification of core causal factors and constraints without compromising on the robustness and relevance of the conclusions drawn.

As the study moved from phase one to phase two, the mode of implementation of the analysis changed to a guided implementation by ILO constituents themselves. Thus the main actors in the analysis in the phase two were the ILO constituents and other key national stakeholders in Bosnia and Herzegovina, who within the framework of a training workshop held in Neum in September, 2010, jointly undertook an analysis structured on the

⁵ The authors are grateful for the comments by Maryangels Fortuny and Sanja Crnković-Pozaić that helped shape the document. Research assistance provided by Olesea Vinaga in the preparation of this study is gratefully acknowledged.

employment diagnostic tree.⁶ The role of the main authors changed to one of facilitators and guides of the process.

Ultimately, the purpose of the analysis was not just to produce another study, but to undertake an exercise of joint knowledge-building on the country specific constraints, challenges and opportunities for enhancing inclusive job-rich growth. This report attempts to summarize and present findings of this exercise. It highlights the main trends, opportunities and constraints faced by BiH, as shown by the data and identified by national stakeholders – the government, the employers and the workers.

It is hoped that this also serves the purpose of capacity building among ILO constituents in the field of employment analysis, policy integration and coherence, and not least social dialogue; arriving at a common understanding of key employment challenges based on joint analysis.

Growth in Bosnia and Herzegovina from a labour perspective

When we look at growth from a labour perspective, we see that gains in GDP per capita come from either an improvement in age structure, or in labour market indicators such as the labour force participation rate or the employment rate, or finally from gains in labour productivity. This last aspect of labour productivity tends to be often the largest and most volatile component in growth, as it reflects changes in the economy. It is also the most powerful policy variable as it is the easiest to shape in the short-run.

This decomposition can be derived analytically from the following stylized mathematical identity:⁷

$$\frac{GDP_t}{Population_t} = \frac{WorkingAgePopulation_t}{Population} * \frac{LabourForce_t}{WorkingAgePopulation_t} * \frac{Employment_t}{LabourForce_t} * \frac{GDP_t}{Employment_t}$$

With some mathematical manipulation,⁸ we see that growth rate of GDP per capita - left hand side of the equation - is a sum of growth rate of all the components on the right hand side of the equation. **Table 1** presents this decomposition for BiH. Population data for the years 2007-08 is however dubious as it shows a *decline* of over 3 per cent over the two years. This population decline inflates growth in GDP per capita as well as impacts all labour related indicators. However, assuming that data until 2007 and from 2008 are comparable, we can still draw out some important conclusions.

⁶ For the list of participants in the workshop and contributors in the second part of the present study, please see Appendix A.4.

⁷ Formula adapted from the one presented in the World Bank's draft publication "*The role of employment and labour income in shared growth: what to look for and how*", 14 December, 2007

⁸ Explained in Appendix A.2

We see that pre-crisis years had a high growth rate of around 7 per cent, but a lot of this growth was due to improving indicators in demographics and the labour market as the age structure improved and labour force participation and employment grew. The scope of productivity in driving growth has been largely untapped. Though productivity grew at a high rate in the year just before the onset of the crisis, the crisis impeded this growth. During the crisis years, the gains in labour market indicators were lost as well as unemployment grew and activity rates fell.

Table 1. Decomposition of growth from a labour perspective (% change)

	2006-07	2007-08*	2008-09	2009-10
GDP per capita	7.7	14.9	6.7	1.0
Productivity	1.3	7.2	7.6	2.9
Employment rate	3.1	7.5	-0.9	-4.2
Activity rate	1.9	-0.1	-0.5	2.2
Age structure	1.4	0.4	0.5	0.1
Sum	7.7	14.9	6.7	1.0

*Population fell by over 3 per cent according to LFS over 2007-08. This explains the exceptional growth rate of per capita GDP.

Source: LFS 2009, 2010 and CBBH 2010

Note: this table has been revised with data published after the workshop.

Identifying overarching concerns for Bosnia and Herzegovina

Though the changing age structure contributed to per capita income growth (**Table 1**), this trend was not exactly positive. The reason for this is that the population has been consistently declining as per the Labour Force Survey (LFS) data, possibly partially due to outbound emigration. Only the year 2010 saw a levelling out of this trend. Part of it was due to the changing age structure, while the other part, due to outbound migration. This fall in population inflates the GDP per capita – GDP per capita has not risen due to economic advances or gains in productivity, but rather due to a decreasing number of people sharing the economic pie. In fact, **the shrinking population and maturing demographic structure** of BiH was identified as a major concern by the workshop participants.

Moreover, though the data indicates positive trends in the promotion of labour force participation and employment generation, in reality, the gains are not sufficient. **Inactivity and unemployment remain highly pertinent concerns** for the country. This was recognized by the workshop participants and they overwhelmingly supported policy support to further promote labour force participation and employment creation. The **gender dimension in this regard was of special importance**, as women tend to be more inactive and face a greater prospect of unemployment.

While the post-crisis scene is yet unclear, one can imagine that the pattern of growth would not be drastically different without serious policy intervention. **Increasing productivity** – most importantly via promoting **strong and sustained growth** – would remain a huge challenge, especially as this would raise living standards via wages, and promote a fuller utilization of BiH's human resources – inactivity and unemployment rates are prohibitively high in the economy as we will see in the following pages. Expanding productivity would also mitigate to a certain extent the impact of an ageing society on the economy. Moreover, it would enhance the competitiveness and viability of domestic industry in an international economy.

In addition to these issues as raised by **Table 1**, the workshop identified **the main constraints to productivity growth which included** a lack of developed markets,

administrative barriers (corruption) and poor regulation, lack of quality labour, high labour costs, a poor business climate and an insufficient entrepreneurial, financial and physical infrastructure. Of chief concern among these were the issues of **education quality and skills development** which perhaps all participants agreed upon. The workshop also concluded that productivity growth must not be at the cost of the environment, in which regard BiH's past record has not been particularly admirable.

Organization of the report

The report is organized in line with the formula. We look first at demographic features and age structure in **section 2**, after which we turn to the labour force and employment in **section 3**.

With **section 4** we take a first look at the productivity aspect, which we begin by looking at the quality of human resources. Educational attainment, skills and other human resource features are presented firstly by looking at major past trends, and then at the constraints identified in the area.

The other aspect of productivity – that of the opportunities presented to the human resource – is considered in **section 5**, where we look at past economic growth along with the pattern of growth in terms of sectors. Comparing GDP growth with labour and employment growth, we obtain estimates of labour productivity and employment elasticity. Since it is believed that economic growth has been of insufficient magnitude, we discuss the main constraints to strong and sustained growth as identified by the workshop participants. In the same section, aspects of sustainability of economic growth are brought up.

A final section, **section 6**, looks at the issues of poverty and inequality. Conclusions follow in **section 7**.

The report reflects the data and analysis undertaken in an initial background study (phase one of the employment diagnostic analysis), and the outcomes of the workshop held in Neum with the government and ILO constituents in September 2010 (phase two of the analysis). All information is attempted to be presented in a cohesive manner such that the reader gets a complete picture of the country's employment and labour market situation and its constraints, as seen from the eyes of the government, ILO constituents, academics, and the ILO itself.

2. Demographic structure

2.1 Population

According to the last census undertaken in 1991, before the onset of war, the population of Bosnia and Herzegovina was 4,377 thousand people. As a consequence of the war, the population changed dramatically: a quarter million lives were lost, some 2.2 million people emigrated or were displaced. Since the war 1.1 million refugees have returned to the country, but the total population remains much smaller than before the war. Many have also left the country since the war in search of work abroad or for personal reasons.⁹ These movements combined with changes in birth and mortality rates have also had profound impacts on the age structure of the population and have increased the relative size of the dependent population.

In the past decade the return of refugees and natural population growth have stabilized the demographic situation, and the latest 2009 Labour Force Survey¹⁰ estimated the population at around 3.8 million inhabitants.¹¹ The gender distribution of working age population is balanced; however, there are many more men in the labour force than women due to very high inactivity rates among women.

2.2 Age composition of the population

The changes in the age structure of the population in BiH over the past decades reveal a worrying trend of a rapidly ageing population. According to the estimates of the National Agency for Statistics in 2007, the share of the population below 14 was half of what it had been at the time of an earlier census in 1971 (**Figure 1**). The share of the working age population grew disproportionately slow, whereas the share of the older population tripled over the period in question, from 4.7 per cent of the population in 1971 to 15 per cent, according to 2007 estimates.

The gradually declining population growth rate resulted in a contraction of the share of the population aged below 14, by 17 percentage points since 1971. Caused by a combination of factors (the war, negative population growth¹² and outbound migration), this places a heavy burden on the national economy. This was recognized by the workshop participants as a major threat to the future of BiH. In the years to come, a declining working age population will have to provide for a growing elderly population, while continued

⁹ Unfortunately all figures on these population movements are rough estimates as there are no reliable data on migration.

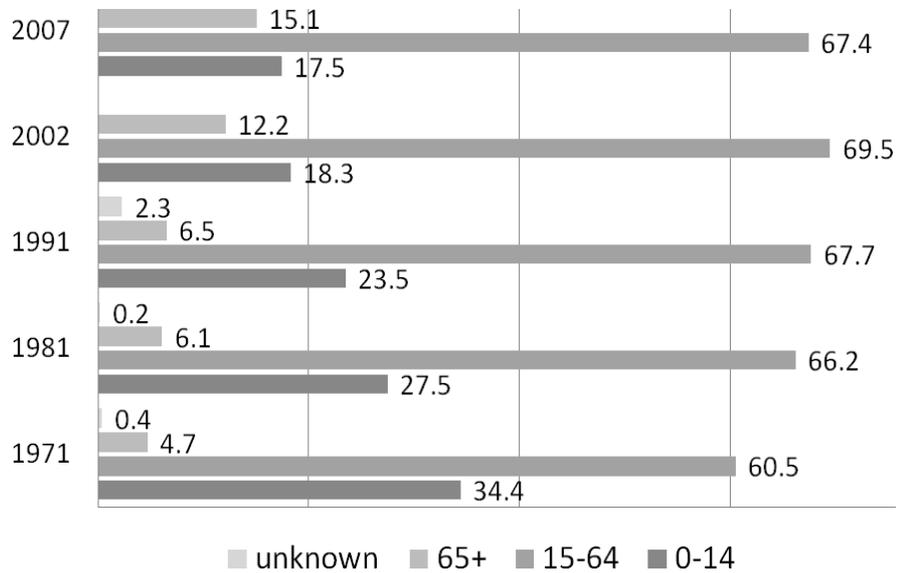
¹⁰ LFS (2009).

¹¹ According to the latest estimates from the Agency for Statistics of Bosnia and Herzegovina. Other sources offer lower estimates, viz. the 2009 Labour Force Survey estimated the total population at 3.1 million and the 2007 Household Budget Survey estimated it at 3.4 million in 2007. The Labour Force Survey is the primary source of information on the situation on the labour market. The survey has been carried out annually since 2006, the latest being the LFS (2009).

¹² UNDP (2009) estimates a population growth rate of 0.3 between 1990-1995 and -0.1 between 2005 and 2010

migration of the young abroad would further deteriorate the dependency ratio. A huge pressure impends on the national pension fund to supply growing numbers of beneficiaries while receiving fewer contributions.

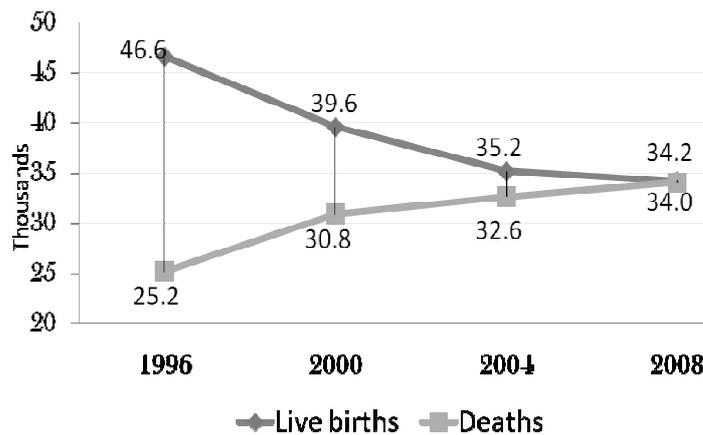
Figure 1. Age structure of the population (%)



Source: BHAS (1998), BHAS (2007), BHAS (2008)

Demographic data shows that over the years the number of live births dropped and the number of deaths increased resulting in almost zero natural growth by 2008. The natural change of the population (the difference between live-births and deaths) dropped from 21,442 in 1996 to 150 in 2008 (Figure 2).

Figure 2. Natural change of the population of BiH, 1996-2008



Source: BHAS (2009)

Although the size of the working age population will be growing in the coming years, in little over a decade the current trend of negative natural growth will eventually reverse this trend. Without even taking the outbound migration into account, the working age population will start shrinking, which will result in an increased dependency ratio.¹³

Hence, in order to maintain the existing standards of living, the share of the labour force base has to be restored and expanded, possibly by attracting numerous emigrants back into the country. At the same time, employment rates will need to increase. A steady joint increase in formal employment and productivity must be ensured.

2.3 Migration

According to the Human Development Report 2009, Bosnia and Herzegovina ranked 13 in the world for outbound migration with an emigration rate of 25 per cent.¹⁴ Bosnians migrate mainly within Europe. Their primary countries of destination are the immediate neighbours - Serbia and Croatia, then Slovenia, Austria, Germany, France, Sweden, Switzerland, the United States, Canada and Australia.¹⁵

The World Bank's *Migration and Remittances Factbook* reports that in 2005 there were 1,472 thousand Bosnian emigrants around the world.¹⁶ The remittances transferred by the migrants are estimated at around 2,500 to 3,700 million USD a year, which is equivalent to 17-20 per cent of the GDP, and play a significant role in the country's economy. Official statistics suggest that remittances inflow to Bosnia and Herzegovina grew by over 130 per cent over the past decade, and in 2009 Bosnia and Herzegovina ranked 7th in the world in terms of remittances received per capita.¹⁷ Remittances as an alternative source of income may also in part explain the high inactivity rates in the country.

Emigration flows in the years following the war were mostly induced by political reasons and comprised refugees and asylum seekers. Later Bosnia and Herzegovina experienced a large wave of returning migrants. However, at present the motive for migration is mainly economic. Highly-skilled workers are especially prone to seek more gainful employment abroad, which creates a problem of brain-drain. It is estimated that some 20 per cent of those aged 25 or more of BiH origin and who have tertiary education presently live in one of the OECD countries.¹⁸ The well-established migrant networks

¹³ *Dependency ratio, actual*: Total non-employed population divided by the employed population

Dependency ratio, age based: Non-working age population (under 15 and 65 and over) divided by the working age population

¹⁴ UNDP (2009).

¹⁵ WB (2008).

¹⁶ Ibid.

¹⁷ For the latest remittances data see [http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/RemittancesData_Nov09\(Public\).xls](http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/RemittancesData_Nov09(Public).xls) (detailed) or <http://hdrstats.undp.org/en/indicators/51.html> (ranking). See also UNDP (2009).

¹⁸ WB (2009b: 238).

facilitate for a high mobility of people, whether formal or undocumented, the latter becoming of a growing concern in the recipient countries.

The impact of migration on the source country is complex. On the one hand, migration depletes the domestic human resources base and further deteriorates the age-dependency ratio; while on the other, the remittances transferred by migrants to their families back home significantly contribute to the domestic economy. In either case, a healthy balance is crucial for the economy. While migration abroad may offer an important economic palliative for the individual migrants as well as for the society at large at times of severe crisis, it does not provide a sound basis for sustainable social and economic development. To lay a foundation for such a development it becomes important to encourage return migration, while continuing to leave the option to seek work abroad open for those who wish to do so. Local labour markets must be made attractive, and more job opportunities need to be created, not least for the highly-skilled. Participants at the workshop talked of the programs in place aimed at attracting emigrants back into the country, one of them the “Programme for self-employment and employment for returnees”. If confirmed to be effective, it was felt that these programmes should be advanced.

3. Employment and labour force characteristics

3.1 Working-age population

According to the 2009 LFS, the working-age population (here defined as persons aged 15-64) makes up over two thirds of the total population.¹⁹ In absolute numbers the working-age population ostensibly shrank by almost 7 per cent between 2006 and 2009.²⁰ Half of the persons in working-age are aged 25-49, while less than a third are aged 50-64 (**Table 2**). Despite the current favourable age structure with two thirds of the population in working-age, the actual dependency ratio is high due to a very low employment rate, whereby each bread-winner is bound to support another 2.7 persons (**Table 3**).

Table 2. Participation in the labour force by age groups, by sex, 2009

<i>Age</i>	<i>15-24</i>	<i>25-49</i>	<i>50-64</i>	<i>15-64</i>	<i>15+²¹</i>
Working age population (000)	432	1040	617	2088	2594
-men	223	515	294	1031	1252
-women	209	525	323	1057	1342
In labour force (000)	141	718	251	1110	1131
-men	90	438	162	691	703
-women	51	280	89	419	428
Activity rate (%)	33	69	41	53	44
-men	40	85	55	67	56
-women	24	53	28	40	32
Employment rate (%)	17	53	34	40	33
-men	22	67	45	51	43
-women	11	40	24	29	24
Unemployment rate (%)	49	23	17	25	25
-men	47	21	18	23	24
-women	53	25	15	26	26

Source: LFS (2009: Table 2). For data on the entities, see A.3., Tables 1 to 1.2

3.2 Labour force participation

Despite the fact that the labour force participation rates have shown a steady growth since 2006, except for a loss of 0.3 percentage points due to the 2008 global crisis, in 2009 the activity rate recorded was still remarkably low at 53 per cent (**Table 3**). The increase in the activity rate was mostly caused by growth in the activity rate in the Republika Srpska (RS) by 7 percentage points; while in the same period it dropped by 1 percentage points in

¹⁹ LFS (2009).

²⁰ Though its share in the total population has changed only by 0.2 percentage points as the population size as estimated in the LFSs has contracted over years

²¹ Aggregate figures for population aged 15 and above are given here for the sake of comparability with the LFS calculations. It is the opinion of authors that calculating activity and employment rates as a share of the population aged 15 and over can be misleading. Therefore, this paper defines the working-age population as persons aged 15-64

the Federation of Bosnia and Herzegovina (FBiH) and 2 percentage points in Brcko District (BD) (See A.3., Table 2-2.2a).

Table 3. Participation in the labour force in BiH, by year

<i>Total</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
Total population (000)	3372	3315	3211	3129
Working age population 15-65	2242	2235	2120	2088
Dependency ratio, actual (%) ²²	3.3	3.0	2.7	2.7
Dependency ratio, age-based (%) ²³	0.5	0.5	0.5	0.5
Activity rate (%) ²⁴	51.2	52.2	53.5	53.2
Employment rate (%) ²⁵	35.0	36.7	40.7	40.1
Unemployment rate (%) ²⁶	31.9	29.6	24.0	24.5
Registered Unemployment rate (%)	45.7	44.4	42.6	45.9

Source: LFS (2009: Table 2) and LEA for data on registered unemployment.

Labour force participation rates vary greatly by age and sex (**Table 2**). The most active group of population with an activity rate of 69 per cent are the ones aged 25-49. Yet even here, the differences between sexes are striking: as many as 85 per cent of men in this age-group are active, against only 53 per cent of women. Overall, only two in five women (40 per cent) of working-age participate in the labour force. For information on the discussions on the gender dimension in BiH, refer to the box on gender inequality in **section 5**.

The lowest activity rates are observed among the youth (aged 15-24). Merely one third of the population aged 15-24 participates in the labour force. Here, too, the gender differentials are dramatic: labour participation rate for young women – 24 per cent – is little over a half of the rate for men – 40 per cent. Such poor activity rates among the young population are partly because they are in education.²⁷

Another factor to be counted in when assessing the low activity rates in the country is outbound migration on the one hand, and the informal economy on the other. Often the remittances received by the families of migrants may suffice to sustain a decent living in the country of origin. The informal economy on the other hand, might serve as a first employer as it easy to gain entry into, and therefore delays their entry into the (formal) labour force.

²² *Dependency ratio, actual:* total non-employed population divided by the employed population

²³ *Dependency ratio, age based:* non-working age population (under 15 and 65 and over) divided by the working age population

²⁴ *Activity rate:* Labour force divided by working age population * 100

²⁵ *Employment rate:* employed divided by working age population * 100

²⁶ *Unemployed rate:* unemployed divided by labour force * 100

²⁷ According to the most recent data the gross enrolment rate in secondary education in Bosnia was 89 per cent, and 33.5 per cent in tertiary education in 2007 (WB 2009a).

3.3 Unemployment

According to the LFS (2009) figures, unemployment in BiH stands at 24.5 per cent (**Table 3**), which is nearly three times the rate of the EU27 average of 9.5 per cent for the same period. The highest unemployment rate was 28 per cent in BD and the lowest 22 per cent in RS (See **A.3., Tables 2-2.2a**). Through the end of 2008 there was a noticeable trend of decreasing unemployment rate of 7.9 percentage points in BiH, without significant entity differences, which may be attributed to moderate economic growth up to 2008. The slight increase in unemployment observed in 2009 can be explained by the global economic crisis.

Furthermore, most unemployment is long term: half of all unemployed have been out of work for at least five years, and a quarter of them for over ten years. Hence, many if not most of the unemployed can hardly be considered economically active (**Table 4, for entities see A.3., Tables 3-3.2a**). A mere 13 per cent of the unemployed have been out of work for less than a year.

It is evident that the unemployment in BiH is structural rather than frictional. This, in fact, indicates that many if not most of the unemployed are in reality no longer in the labour market, as years of inactivity substantially reduce the chances of finding employment. High long-term unemployment points to the need of additional measures of reintegration of persons who lost their self-confidence and skills needed for the current labour market over the years. The human resources base of the country has to be constantly adjusted to the demands of the labour market through vocational training and lifelong education programmes.

Table 4. Unemployment by duration of unemployment, by sex, 2009

%	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job	1.2	0.1	0.8
Less than 5 months	7.4	8.3	7.7
6-11 months	9.2	7.3	8.5
12-23 months	9.8	11.9	10.7
24-59 months	21.5	25.7	23.2
60-119 months	23.3	20.2	22.1
120 months and more	27.6	26.6	27.2
Total	100	100	100

Source: LFS (2009: Table 13)

There is a sizeable discrepancy between the registered unemployment rate and unemployment rate as defined by the ILO, the number of registered unemployed being almost twice the number of factual unemployed (**Table 3**). According to the Labour and Employment Agency of BiH there were 510.5 thousand persons registered as unemployed on 31 December 2009, which is 46 per cent of the labour force; for women this figure was over 61 per cent.²⁸

The social security system, which entitles the unemployed persons to health insurance, creates incentives to register as unemployed to retain the status in order to enjoy the unemployment benefits (i.e. health insurance, and subsidies corresponding to the years in

²⁸ LFS 2009, BHAS

employment).²⁹ This is a great concern especially for a country with limited resources for public social safety net.

On the other hand, it should be considered that the unemployment data based on the LFS underestimate the under-employment – when many persons employed in the informal economy work on a temporary basis, or when self-employed persons work on the activities that do not require their full engagement.

One of the issues addressed during the workshop was the improvement of the assigned role of employment services in matching labour supply and demand, and collecting of information on skills. It was felt that the “64 point form” on an unemployed person’s characteristics (including skills) was working quite well. A population census and newer technologies could perhaps help the process. There seemed to be a need for an improvement of surveys to assess employers’ needs; and to increase the accountability of employment services at cantonal levels to central bodies on the utilization of funds and success rates. Delegates from RS recommended the promotion of private employment services. In their experience this increased competition and efficiency of the public service as well.

3.4 Employment

The employment rate in Bosnia and Herzegovina experienced consistent growth in the years leading up to 2008,³⁰ when as a result of the economic crisis it fell back slowly (See **A.3., Tables 2-2.2a**). By 2009 both men and women had gained 5 percentage points in employment rates. However, as outlined earlier, the strong growth rate was partly due to the shrinking working-age population, which distorts the real labour market picture. The actual growth of employment in absolute terms was comparatively modest.

The employment rate in 2009 was 40 per cent, which is distinctly lower than the average rate of the EU-27 (65.9 per cent in 2008) and far below the EU target of 70 per cent.³¹ The gender differentials in employment rates are strikingly high – as much as 21 percentage points; only one in four women in working-age are employed. This disparity in employment rates between men and women persists across all age groups, with 28 percentage points difference at it peaks among the persons aged 25-49 (**Table 2**).

Youth employment is of concern with the exceptionally low rate of 17 per cent. A gender disaggregation of youth employment reveals that only one in ten young women

²⁹ According to the Laws on Employment, in all entities (Federation of Bosnia and Herzegovina (FBiH), Brcko District (BD) and the Republic of Srpska RS), the subsidies last from three months for persons employed or insured for up to five years, to up to 12 or 24 months (in case of FBiH) for persons with over 25 years of working experience. The subsidies in the Republic of Srpska and Brcko District amount to 20 per cent of the average salary paid in the District for the previous months. In the Federation of Bosnia and Herzegovina the subvention is 40 per cent of the salary paid in the last three months of the unemployed person’s labour relation as published by the Federal Office of Statistics (CRI 2008, p. 42-43). For more information, see the Law on Health Insurance of FBiH (Article 19), the Law on Health Insurance of Republika Srpska (Article 10), and the Law on Health Insurance of Brcko District of BiH (Article 18), Law on Employment and Rights during Employment of Brcko District of BiH

³⁰ In absolute terms in 2008 employment was 10 per cent higher than in 2006.

³¹ Eurostat (2009).

aged 15-24 are employed. Such a disproportionate distribution of employment between sexes is indicative of fundamental problems in unequal access to labour markets.

The breakdown of the working age population by status of employment shows that the employment structure in BiH is dominated by employees or wage-workers (persons with paid full-time employment) who make up 72.8 per cent of the economically active people; women's share of these wage-workers is 35.8 per cent.

The employees or wage workers are mainly engaged in the services sector, where 58 per cent of the total number of the wage-workers were employed at the time of the LFS (2006) (**Table 5**). The same year, industry employed 38 per cent of the wage-workers. The agricultural sector creates little wage employment opportunities, only 4 per cent of the wage workers were employed in this sector in 2006. On the other hand, some 95 per cent of all unpaid family workers worked in agriculture.

Due to its seasonal nature the agriculture sector provides part-time employment or seasonal work for a half of the part-time workers. The rest of the part-time workers are evenly distributed between the industry and services sectors (**Table 5**).

Almost every fifth person in the labour force is self-employed (**Table 5**), a third of them are women (for a breakdown by sex and by entities, see **A.3., Table 12-12.2a**). Self-employment is largely linked to a lack of opportunities for wage employment. Women are less likely to pursue self-employment than men, but four times more likely to end up as unpaid family workers.

The breakdown of the employment by sector and status reveals that more than a half of the self-employed are concentrated in the agricultural sector. Slightly less than a third of the self-employed are active in the services sector. The smallest number of the self-employed – only 14 per cent – work in the industrial sector – this sector allows little prospect for independent activities as it requires a certain infrastructure base (**Table 5**).

Table 5. Structure of employment by sector and status (%), 2006

	BiH	Agriculture	Industry	Services	Total
Self-employed	22	55	14	31	100
Employees	72	4	38	58	100
Unpaid family workers	6	95	2	3	100
Part-time employment	12	50	20	29	100

Source: LFS (2006), as reported in DEP (2010).

There are large gender differences in the sectoral composition of employment. The industrial sector is largely a male preserve. Industry employs only 16 per cent of the working women as compared to 40 percent of the working men (**Table 6**, for the entities see **A.3., Table 12.1 – 13.2**). In absolute figures, this discrepancy is even more glaring considering the low participation of women in the labour force: in 2009, industry employed 218 thousand of men and 52 thousand of women.³²

³² LFS (2009)

Out of the total number of female employees in the formal sector, 71 per cent worked in wholesale or retail trade, education sector, health, social work, while industry (processing industry) created 21 per cent of jobs for women.³³

The structure of employment in BiH still shows a strong traditional gender patterns, where women seek and find employment in typically female professions.

Table 6. Labour force by economic sectors and sex, 2009, percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	19	26	21
Industry	40	16	31
Services	41	58	47
All industries	100	100	100

Source: LFS (2009).

3.4.1 Employment in the informal economy

Lack of decent and productive employment opportunities results in a large informal economy, which is reflected in a discrepancy of 21 percentage points between registered and actual unemployment as defined by the ILO and presented in the Labour Force Survey.³⁴

Research shows that one third of all employed persons (34 per cent) did not pay pension and/or health insurance fees, which is indicative of the size of the informal economy in the country.³⁵ Depending on the source of data and methods applied, the shadow economy in Bosnia and Herzegovina is typically estimated at around 30-50 per cent of the country's GDP.³⁶

Agriculture is an important source of employment in informal economy, and workers in this sector are least likely to move from informality to formality. Therefore, workers in rural areas face a higher probability of remaining in informal employment for much longer

³³ Ibid.

³⁴ Unemployed person, as defined by the Thirteen International Conference of Labour Statisticians (Geneva, 1982), are those above specified age, who during the reference period were without work, currently available for work and seeking work. For more details, please see: <http://laborsta.ilo.org/applv8/data/c3e.html>. The Labour Force Survey is the primary source of information on the situation on the labour market. The survey has been carried out in BiH annually since 2006, the latest to date being the LFS (2010). The LFS aims at capturing the real unemployment situation, as the respondents are asked to report their factual employment status. The registered unemployment rate is distorted by the number of people reporting as unemployed to claim the unemployment benefits, despite being informally employed or inactive

³⁵ DEP (2010)

³⁶ Krstic & Sanfey (2006)

than workers in urban areas. Those informally employed in services sector are more prone to move to formal employment within the sector.³⁷

In the short term the informal economy provides a safety net for vulnerable groups of the population, helping them out of poverty. However, informal employment, due to its unregulated nature, often offers precarious unemployment, poor working conditions and no social security. While in the formal economy over 90 per cent of workers are in wage-employment, less than a half of the workers in informal economy receive regular salary. Even though there is little difference in weekly work-hours (with those in formal employment working slightly longer), the formal economy has a substantial earnings premium of about 30 per cent compared with the informal economy.³⁸

Nevertheless, large numbers of workers seem to be trapped in informal employment, probably due to poor access to labour markets, slow job creation in formal economy, and a lack of skills to match labour market demand. The share of women and youth in total informal employment is higher than in formal employment. The informal economy employs a large share of the low-skilled labour. Persons with higher education and a university degree have better chances of breaking out of the informality and transferring to the formal economy.³⁹

³⁷ According to the panel observations presented by Krstic and Sanfey (2006) mainly basing on the data from the Living Standards Measurement Studies, among the persons informally employed in the services sector in 2001, over 50 per cent transferred to formality within the same sector in 2004

³⁸ Krstic and Sanfey (2006)

³⁹ Ibid.

4. Development of the human resource base

The human resource base in Bosnia and Herzegovina is both inadequately developed and underutilized. The uneven and often poor quality of education stands out as the major limitation on employability, and sustainable economic development in the country. Poor education quality and a mismatch between labour market demand and supply was also considered by the participants of the workshop as one of the biggest constraints to growth in BiH, and was a recurring theme of discussions. Even though the educational system experienced a moderate recovery in the past decade, there are still persisting challenges, among which are an overly complex institutional setup and administrative fragmentation.

4.1 Literacy and education

Education in BiH is financed and coordinated at the entity and canton level. The amount of resources allocated to education from the state level budget is not big and stood at 4.5 per cent of the country's GDP in 2008; RS and FBiH spend approximately 4 and 6 per cent of their respective GDPs on education, whereas the budget of the Department for Education of BD amounts to 11.2 per cent of the District budget.⁴⁰

BiH lags behind its neighbours in educational enrolment rates⁴¹ with 89 per cent of gross enrolment rate in secondary education against almost 94 per cent in Slovenia and Croatia, with lower rates recorded only in Macedonia (**Table 7**). The enrolment rates for children coming from poor households with parents with low levels of education are much lower than average, which naturally makes it difficult for them to break away from poverty.

Table 7. Educational enrolment rates in BiH and other former Yugoslav countries, 2007

Levels of education	Macedonia	BiH	Slovenia	Croatia	Serbia
Gross enrolment rate, secondary, total	84.2	89.1	93.6	93.6	89.5
Gross enrolment rate , tertiary, total	35.5	33.5	85.5	47.0	48.7
GPI, gross enrolment ratio in primary ⁴²	1	0.9	1	1	1
Pupil-teacher ratio, primary	18.3	16	15.6	16.7	16.6
Pupil-teacher ratio, secondary	13.7	14	10.2	9.3	10.3

Source: WB (2009a).

Even though the enrolment rates in secondary education seem adequate, the educational attainment rates⁴³ are still low with only 47.6 of the persons in working-age

⁴⁰ BHAS (2009), University of Jyväskylä (2008).

⁴¹ *Gross enrolment rate*, as defined by the UNESCO Institute for Statistics, is the total enrolment in a specific level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education in a given school-year: <http://www.uis.unesco.org/glossary>

⁴² *Gender Parity Index (GPI)* of 1 indicates parity between sexes; a GPI that varies between 0 and 1 means a disparity in favour of boys; a GPI greater than 1 indicates a disparity in favour of girls, (UNESCO)

having completed the secondary education, which is partly due to high drop-out rates (**Table 8**). This discrepancy could also be explained by migration, especially among the young people, which severely depletes the country's human resources base.

The decomposition of the working age population by level of education in 2009 reveals disturbing facts: almost a half of the people in working-age – 45.3 per cent - have only attained primary education (that is up to 7 or 8 years of school) (**Table 8**). This is in part likely to be a legacy of war, when destruction of school facilities and disruption of the education process led large numbers to drop out of school, having only attained basic education.⁴⁴ The entrants in the labour force in the early years after the war were affected the most.

Education has close linkages with employment and labour force participation. The Labour Force Survey reports that in 2009, as much as 78 per cent of the working-age population with primary education or less were out of labour force; and only 16.3 per cent of them were in employment (**Figure 3**). The small numbers of unemployed among those with only primary education is due to the wide-spread discouragement that stems from a low employability among people with primary or lower levels of education and results in high inactivity rates.

Table 8. Educational attainment rates, 2009, percentages

Population aged 15+	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>All levels</i>
Working age population	45.3	47.6	7.1	100
-men	34.2	57.5	8.3	100
-women	55.7	38.3	6.0	100
In the labour force	22.9	65.0	12.1	100
-men	21.2	68.4	10.4	100
-women	25.7	59.3	15.0	100
Employed	22.4	63.3	14.3	100
-men	20.0	67.8	12.2	100
-women	26.4	55.7	17.9	100
Unemployed	24.6	70.2	5.1	100
-men	25.8	69.9	4.3	100
-women	23.6	70.0	6.4	100
Inactive	62.7	34.1	3.2	100
-men	50.8	43.5	5.6	100
-women	69.9	28.4	1.6	100

Source: LFS (2009: Table 4)

With a completed secondary education the chances to find employment considerably improve – in 2009, two in five were employed (**A.3, Table 4a**). This population group shows higher labour market participation in general, with larger numbers of both employed

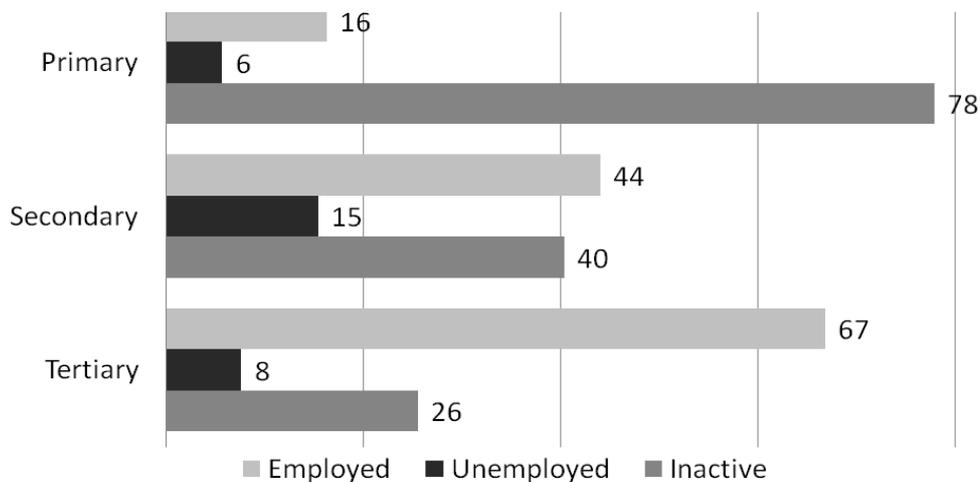
⁴³ *Educational attainment* (school completed) is considered the highest level of completed education, i.e. a regular school that a person completed or an equivalent substitute school, passing the exams in a regular school or completing a course of a ridged education, which, according to valid regulations, recognizes a respective school level (Agency for Statistics of Bosnia and Herzegovina)

⁴⁴ Pavlovic et al. (2006)

(44 per cent) and unemployed (15.5 per cent). Those who have attained tertiary education normally fare much better: three fourth of them are in the labour force and only 7.6 per cent are unemployed.⁴⁵

Figure 3 below clearly shows the interdependency between the level of education and employment status: the higher the level of education the better chances to find employment. Contrary to the general trend, there are more inactive men than women with tertiary education. The Figure 6a below illustrates the interdependency between the level of education and employment status: the higher the level of education the better chances to find employment.

Figure 3. Labour market participation of the working-age population (15+) by educational attainment levels, 2009, percentages of the working-age population



Source: LFS (2009), BHAS

The other side of the coin is that those with higher education have better chances of finding well-remunerated jobs abroad. The so called brain-drain exhausts the qualified human resources base of the country and poses an additional challenge on the labour markets. To reverse this tendency the opportunities for the highly-skilled labour in the national economy need to be improved.

Looking at these figures through gender lenses reveals a striking disparity in labour force participation and educational attainment. More than a half of the women in working-age have completed no more than 8 years of school, and only 11 per cent of those work. The vast majority of women with only primary education – 85.4 per cent – are economically inactive. In comparison, one third of men in the labour force have attained only primary education (**Table 9**) and only two third of them are inactive. Gender differences in the employment rates are relatively smaller for those with secondary education than for those with lower education (**Table 9**, for data on entities see **A.3., Table 4-4.2b**). Yet, half of the working-age men with secondary education are employed, against only a third of women.

⁴⁵ Implying that the unemployment rate among those in the labour force is 10 per cent.

Table 9. Labour force characteristics by level of education as a percentage of the working-age population (15+)

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
Working age population	100	100	100
-men	100	100	100
-women	100	100	100
In labour force	22.0	59.6	74.5
-men	34.8	66.8	70.2
-women	14.7	49.4	80.0
Employed	16.3	44.1	66.8
-men	25.2	51.0	63.5
-women	11.2	34.4	71.3
Unemployed	5.7	15.5	7.6
men	9.8	15.8	6.7
-women	3.5	15.0	8.8
Inactive	78.0	40.4	25.5
-men	65.2	33.2	29.8
-women	85.4	50.6	18.8
Unemployment rate	25.9	26.0	10.2
-men	28.2	23.7	9.6
-women	23.6	30.3	10.9

Source: LFS (2009: Table 5)

The dramatic variations in employment rates between different educational attainment groups point to the significance of education and skills in the competition for jobs and access to the labour market. They further suggest that the importance of education for accessing employment is considerably greater for women than for men. Therefore, low levels of education among a large part of the working age population prove to be a major constraint on their ability to access employment.

4.2 Constraints within the education system

Bosnia-Herzegovina has gone through a fundamental social and economic transformation over the past decades. Such transition necessitates a highly flexible labour force that is able to adapt to the changing market needs, especially in the view of the prospect of the EU accession. A system of lifelong learning is vital for the continuous adjustment of the human resource base to the changing needs of the labour market, as modern market economies require a very different set of professional skills and competences across all sectors than the previous socialist economy did. To develop the human resources base in BiH the educational system must cater to a wide range of the population.

The present education system however, does not fulfil any of these standards. Due to inefficiencies in matching labour demand with supply, lack of lifelong learning opportunities and the lagging enrolment and educational attainment rates, the human capital of BiH goes underutilized. In addition, the quality of education is thought to have deteriorated during the transition, and there has been a shift in focus from practical skills on the job market to attaining qualifications of dubious distinction. Workshop participants felt that private employers do not trust the quality of skills and education of those entering the labour market, and this contributes heavily to youth unemployment. The value of education is further undermined by good governance issues, transparency and unfair competition, which the participants felt were especially the case in awarding public sector jobs.

There's a visible mismatch between the supply and demand on the labour market, resulting from inadequate policy coordination between the economic planning and educational system. This is added to by a lack of coordination between employers and education institutes, and the failure of employment services to match the needs of employers and job-seekers as well as to provide career guidance and counselling services.⁴⁶ In the workshop, this was a recurring issue of discussion, and the matter of shortage of those skills sought by export-oriented and import competing industries was thought to threaten future economic growth of the country.

Box: Gender inequality

According to the statistics the educational attainment rates are much lower among women, which can be attributed to cultural factors that determine the role of women in family and society at large.

The gender discussion at the workshop aimed at separating cultural and traditional factors from structural factors while studying the gender differences observed in the labour market statistics for BiH. Structural factors were believed to be easier to address through policies than the cultural ones.

Facilitating easy access to child care was considered necessary to promote women's participation in the labour force. Since in BiH child care is traditionally the responsibility of women such facilities have direct impact on their decision to work. This is especially the case for self-employed women who normally work longer hours. Despite the fact that there is a good regulatory basis for the country stipulating maternity leave and other allowances, practical implementation of these is irregular.

The presence of the so called *glass ceiling* for women when it comes to their career advancement was also blamed on cultural factors. It was noted that women from poorer families were more likely to work as it had a direct impact on their families' well-being.

The reasons behind the extremely high inactivity rates for women in BiH were explained by the fact that the industries where previously women were mainly employed were hit hardest during the transition. On the other hand, owing to the traditional role of women in the society, there is a lack of willingness among women to own property or take risks.

A number of reforms in educational system, such as the adoption of the Law on Higher Education in BiH, have shown positive results. However, because these reforms occur in isolation from one other rather than in concert, the needs of the labour market are not effectively addressed. An interdisciplinary approach is necessary to attend to the country's labour market requirements.

Vocational education and training (VET) and life-long learning (LLL) in BiH have received considerable attention and are being reformed to make it increasingly modular, flexible,

and practical. Progress is slow and it will take time before the results of reform will be reflected in improved labour market outcomes. VET and LLL are funded via various mechanisms in BiH such as employers' contributions, employment services (through public funds coming from either unemployment contributions or the budget), the Government, the Instrument for Pre-accession Assistance funds, as well as by the employees themselves (in case of LLL).

All these problems affecting the human capital in BiH assume larger dimensions given the zero or negative population growth and the prospect of a shrinking workforce.

⁴⁷ Most of the data cited from here on is that which was available by mid 2010, when the phase one was concluded.

5. The Macroeconomic Framework⁴⁷

During the period 2006-08, the BiH economy grew at about 5-6 per cent per annum (Table 10). With zero population growth,⁴⁸ GDP per capita grew at the same pace as the GDP. This growth was a result of expanding domestic demand as wages and per capita income increased. The large-scale inflow of remittances and increasing bank lending for consumption also contributed to the increase in consumption demand. Export growth was robust, too, though always outdone by import growth, resulting in an increasingly negative trade balance. Investment growth in the economy was strong as banks lent increased amounts to private enterprises per year. The macroeconomic fundamentals of the country have also been stable. Inflation was contained except during the first half of 2008, when it went up to 7 per cent, which can be explained by the worldwide rise in oil and food prices. Moreover, tax revenue collections rose while foreign debt fell.

Table 10. Overview of the economy and labour market - growth rates

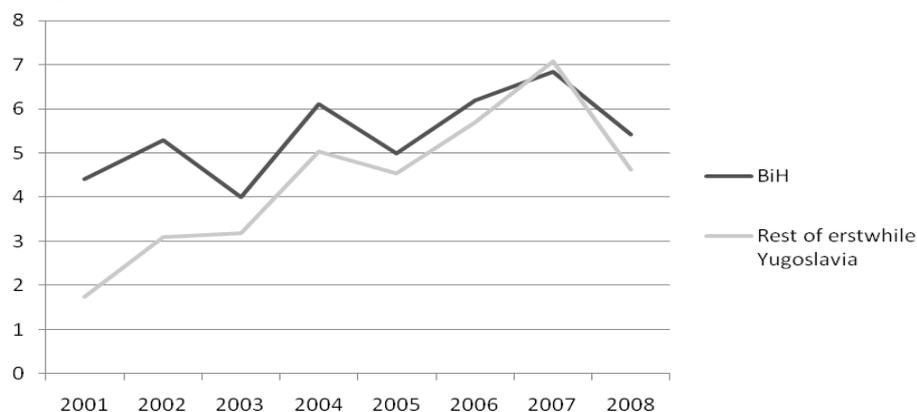
	2006-07	2007-08	2008-09
GDP	6	5.5	-3*
Labour force	1.6	-2.8	-2.6
Employment	4.8	4.7	-3.5

Source: LFS (2009) and UN national accounts statistics, <http://unstats.un.org/>

Note: *The GDP growth figure for 2009 is based on the estimate of the DEP (2010)

Within the country, FBiH and RS echoed this trend. BD's growth was more volatile, but due to its small share in the economy, it did not impact the overall growth much. BiH also outperformed the average growth of countries that constituted former Yugoslavia - Macedonia, Montenegro, Croatia, Serbia and Slovenia - from the period 2001 onwards (Figure 4).

Figure 4. GDP growth (%), 2001-08



Source: WB (2009B)

⁴⁷ Most of the data cited from here on is that which was available by mid 2010, when the phase one was concluded.

⁴⁸ BiH in Figures 2009, p. 6. The total population is estimated to have remained unchanged between 2004 and 2008. Other estimates, such as those in the Labour Force Surveys suggest a decline in population of up to 7 per cent between 2006 and 2009.

After 2008, however there has been a slowdown in the economy owing to the global financial crisis. Estimates of the Department of Economic Planning (DEP), in accord with those of the IMF, suggested an overall *decline* in the real GDP by 3 per cent in 2009.⁴⁹ The reasons behind are that the domestic demand suffered from a drop in remittances, FDI fell and as export partners such as Italy and Germany posted their poorest growth in 20 years, which is why demand for exports suffered. The most affected industries were base metals, electric power and machines and appliances which together constitute over 60 per cent of export value. Another channel for the transmission of the crisis has been the financial industry. The large banks of BiH, owned by western banks, reduced lending as their funds dried up. Industries dependent on crediting such as construction, automobiles and machinery were likely to be impacted the most. The reduction in these activities is expected to have spilt over into those industries that supply inputs to these such as metals, construction materials, energy etc.

The economic crisis rapidly translated into an employment crisis that began at the end of 2008. While the worst of the crisis is over, recovery was expected to be slow with zero growth in 2010.

5.1 Growth break-down by sectors

Agriculture, industry and services constitute about 10, 25 and 65 per cent of the economy, respectively (**Table 11**). Of these, industry grew the fastest, followed by services and agriculture (**Table 12**). While services' contribution to growth was commensurate to its size (60-65 per cent), industry contributed more (about a third of total growth came from this sector) and agriculture less than its share in 2008 (**Table 13**).

Table 11. Sectoral composition of the GDP and Employment

GDP	2005	2006	2007	2008
Agriculture	10.1	10.3	9.8	8.9
Industry	25.7	25.4	26.4	27.4
<i>Manufacturing</i>	11.5	12.6	14.6	15.4
<i>Construction</i>	4.9	5.3	6.3	7.3
<i>Other</i>	9.2	7.5	5.5	4.7
Services	64.2	64.3	63.9	63.7
Total	100	100	100	100

Employment	2005	2006	2007	2008	2009
Agriculture		20.6	19.8	20.6	21.2
Industry		30.7	32.6	32.5	31.5
Services		48.7	47.5	47.0	47.3
Total		100	100	100	100

Table 11a. Labour Productivity (Convertible Marks per employee)

	2006	2007	2008
Agriculture	9687	9786	8916
Industry	16070	16022	17397
Services	25634	26633	27897
Total	19414	19814	20585

Source: LFS (2009) and National Accounts (2007, 2008).

⁴⁹ NEP (2010)

Considering the sectoral composition of employment, one sees a disparity between the sector size in terms of value added and the number of people it employs. Economic growth came mostly from industry and services, which contributed to about 90-95 per cent of growth over the period 2005-08 (**Table 13**). Of these two sectors, however, services – the larger of the two sectors - did not contribute proportionately to growth in employment.⁵⁰ Over 2007-08, in fact, agriculture contributed to a large chunk of the growth in employment, making its contribution to employment growth over 2006-08 as high as 20 per cent. Though increases in employment are a positive trend in a country suffering from large unemployment, and these increases contributed to growth in GDP per capita (**Table 1**), this employment increase wasn't in the most desirable sector. Agricultural output only contributed to about 7 per cent of output growth over the same period, which implies that those employed in the sector became increasingly inefficient, as well as poorer than the workers in other sectors.

This ability to absorb excess labour at the expense of labour productivity gives the agricultural sector very large employment elasticity (**Table 14**).⁵¹ On the other hand, in services, where growth has been at the expense of employment, the employment elasticity was low. Only about 38 per cent of growth came from increases in labour, while the rest was from increases in productivity. As services by definition tend to be highly labour intensive with comparatively little scope for increasing productivity, the high rate of productivity growth in this sector suggests a structural shift between services rather than a rise in productivity in the same services. The structural change occurred from low productivity services to services that are more knowledge and technology intensive and have higher productivity. In industry, growth seems to have resulted from a healthy combination of employment and productivity growth.

Table 12. Indices of growth, employment and value added. 2006=100

Employment	2006	2007	2008	2009
Agriculture	100	100.60	109.58	108.98
Industry	100	111.24	116.06	108.43
Services	100	102.28	105.82	102.78
Total	100	104.81	109.74	105.80
Value added index. 2006=100				
	2005	2006	2007	2008
Agriculture	95.516	100	101.630	100.865
Industry	97.749	100	110.914	125.646
Services	96.529	100	106.264	115.166
Total	96.735	100	106.970	116.360

Source: LFS (2009) and National Accounts (2008)

Table 12a. Growth rate of productivity, 2006-2008

Sector	2007	2008
Agriculture	1.031	-8.716
Industry	-0.331	9.582
Services	3.985	9.343
Total	2.161	6.619

Source: LFS (2009) and National Accounts (2007, 2008)

⁵⁰ The trend is reversed in 2009, which can be attributed to the global financial crisis - an expected outcome of which is the increased informalisation of labour markets. Services and agriculture are two sectors that are able to absorb labour in an informal set-up.

⁵¹ Employment elasticity is defined as the percentage increase in employment due to a percentage increase in output.

Table 12a shows us that services were the largest contributor to productivity growth, followed by industry and then agriculture.⁵² The crisis has exacerbated this mismatch between contribution to economic growth and to employment (**Tables 13 and 14**). While employment has fallen overall during the crisis, it has remained more or less stable in agriculture. There has been a fall in agricultural productivity in the last year, while an increase was observed in other sectors. Industry's growth in productivity was double that of services, which can be explained by a sharper fall in employment in services and the inability of industry to absorb informal and underemployed labour.

One of the main generators of growth has been industry, which grew by a quarter between 2006 and 2008 (**Table 12**). Around two-thirds of the growth in production came from increased employment, while the rest of it came from a growth in productivity (**Table 14**). This ratio seems desirable to help meet the twin challenges of increasing employment, productivity and returns to labour, and rebuilding economy. The growth within the dynamic industrial sector is largely owed to the manufacturing industry. In 2006, 76 per cent, in 2007, 65 per cent, and in 2008, 38 per cent of growth in industry came from manufacturing.⁵³ Construction consistently provided about 30 per cent of the impetus for industrial growth over the same period. As manufacturing industry is a sector that requires longer-term commitments in terms of investment, infrastructure and other, it is usually a sign of improving economy when the sector grows. The manufacturing sector typically allows less opportunity for informal labour relations to occur than in other sectors.

Table 13. Sectoral contribution to growth

GDP	Agriculture	Industry	Services	Total
2006	11.6	22.6	65.8	100
2007	5.9	33.4	60.7	100
2008	3.7	34.1	62.2	100
Employment				
2006	-	-	-	-
2007	2.6	73.7	23.7	100
2008	36.6	29.3	34.1	100

Source: LFS (2009) and National Accounts (2008)

Table 14. Employment elasticity, 2006-2008

	2006	2008
Agriculture	1	(11.08)
Industry	1	0.63
Services	1	0.38
Total	1	0.60

Source: LFS (2009) and National Accounts (2008)

⁵² One would normally expect productivity to be highest in industry, where the scope for replacing labour by capital is largest. However, in the case for BiH apparent structural changes within services have resulted in this sector leading the way in productivity growth.

⁵³ Calculated from **Table 3**

5.2 What has been constraining growth?

Though Bosnia and Herzegovina had been growing at a decent pace, it is felt that the pace needs to be quickened. At the workshop the issue of strong and sustained growth was dealt with at many junctures, as the linkage between economic growth and employment generation was widely recognized. In this section, the main barriers to (as well as opportunities for) growth as identified by the workshop participants are presented.

Figure 5. Constraints and Opportunities to growth (workshop outcome)

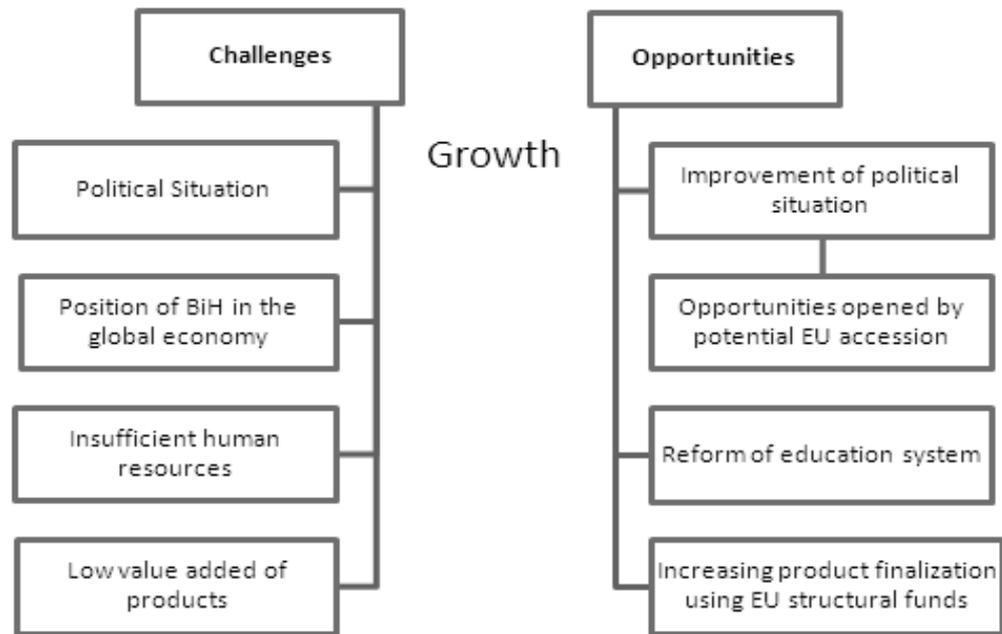
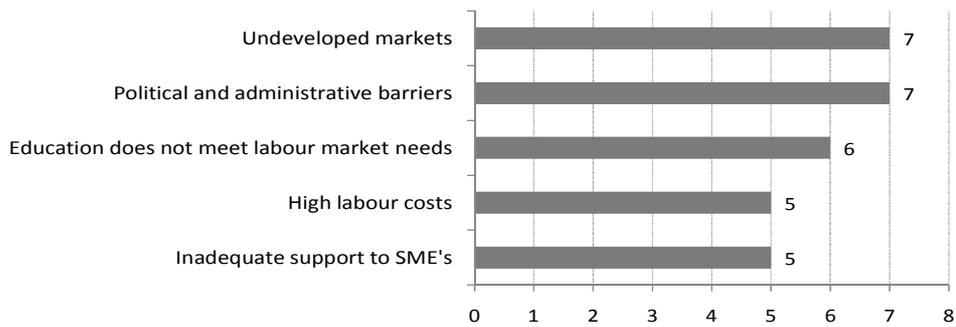


Figure 5 presents the general barriers to growth in order of importance. The majority of the barriers identified were such that they could be overcome by government intervention and policy.

Political and administrative barriers - the complex administrative structure, poor cooperation among administrative departments, and long and multiple procedures for business registration - were believed to pose constraints on entrepreneurship development. Other than this, inadequate support to businesses with the lack of fiscal incentives or special economic zones were found to curtail entrepreneurship and thereby, the economy. The poor regulatory environment with unclear property rights and poor governance further hindered any sort of business climate from developing.⁵⁴

Figure 6. Barriers to growth ranked by importance by the workshop participants (0-less important, 8-most important).

⁵⁴ While a business-friendly environment was agreed to be a basic necessity for economic growth, it was noted that creating a business-friendly environment alone would not suffice. It was suggested that a strategy for industrial and human resource development needed to be put in place.

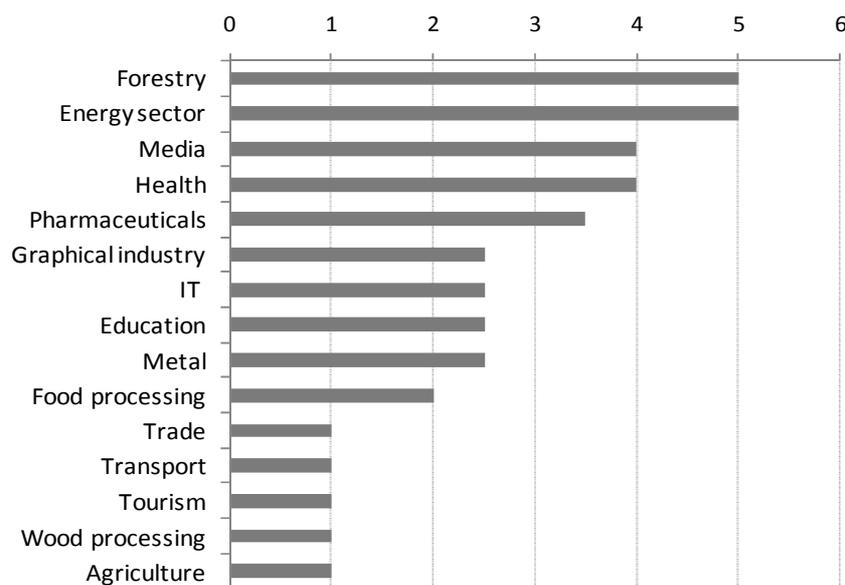


Corruption was considered in a separate section and was seen to have been reinforced by the transition process and was believed to pose a serious challenge to both the rate and quality of growth. Corruption increased the cost of doing business and discouraged the creation of new jobs. The fact that there is no strong mechanism to eliminate it – a lack of political will and of an independent judiciary – had only fostered it further. It was decided that there was also a need to improve labour inspection and overall governance of labour markets.

From the labour side, the government was seen to have supported very high labour costs, while having failed to provide an education system that matched the labour market needs.

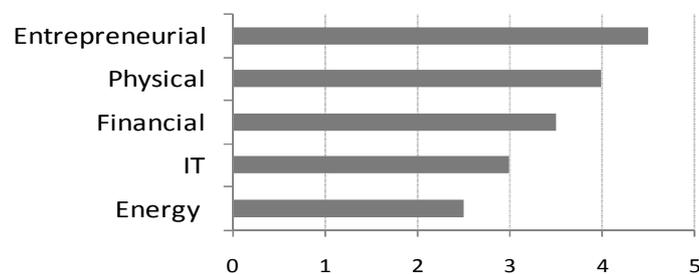
Other than these factors that are strongly related to the political space, one major constraint identified was that of undeveloped markets. It was felt that some markets did not function efficiently, suffered from a lack of competition or had a heavy presence of monopolies. Encouraging entrepreneurship in key undeveloped markets was prescribed. **Figure 7** presents the workshop participant's opinions on which sectors were the most open, and which were the hardest to access.

Figure 7. Degree of competition within a sector, as perceived by the workshop participants (0-free market, 6-closed market)



In addition to general barriers to growth, several infrastructural barriers were identified and ranked by level of importance. Entrepreneurial infrastructure was identified to be most poorly developed, followed by physical and financial infrastructure (**Figure 8**).

Figure 8. Infrastructural barriers to growth (0-less important, 5-most important)



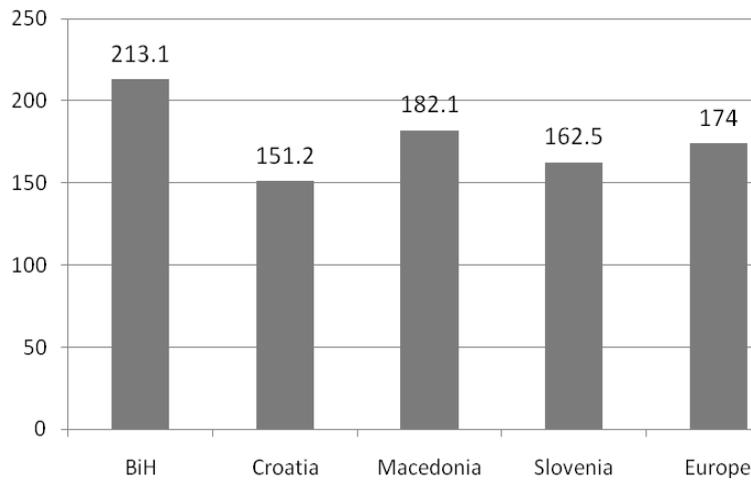
5.3 Responsibility to the future – the issue of sustainable growth

Promoting inclusive and productive employment in the present must be done in a manner that does not compromise the possibilities for the coming generations to access productive employment. Productive employment, much like growth, needs to be sustainable. Policies aimed at achieving inclusive and productive employment need to take the legitimate rights and interests of future generations as well as those of the present into account.

Three broad groups of aspects pertaining to sustainability deserve to be singled out: environmental aspects, investments in the young and climate change. While investments in young will be discussed later in sections on labour and education, we consider the environmental and climate related aspects here.

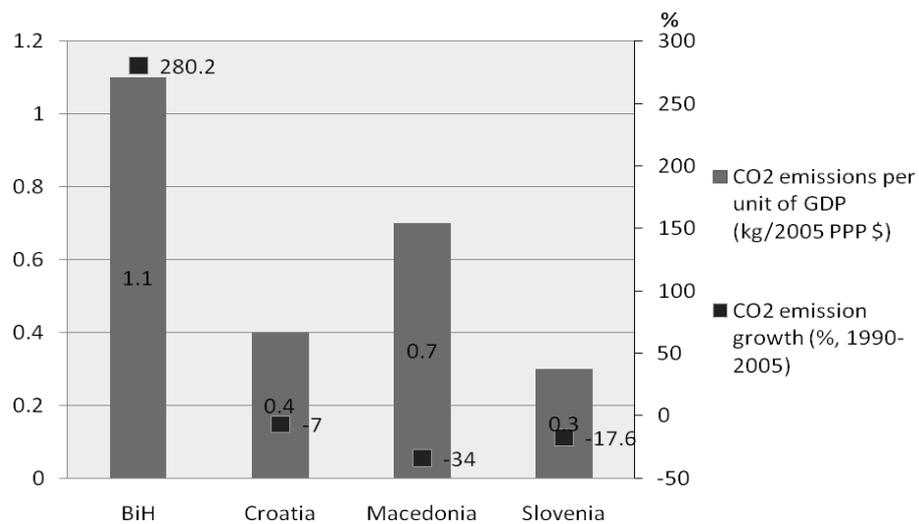
BiH is an energy intensive economy and consumes more energy per unit of GDP than any neighbouring country (**Figure 9**). The CO₂ emissions are large and growing, despite the fact that hydro power supplies 43.9 per cent of electricity needs (**Figure 10**). Moreover, BiH is the third largest SO₂ emission producer in Europe. Such high energy usage in BiH - despite a small manufacturing sector - is a cause of worry from the point of view of sustainability of the economy. On the bright side though, forests in BiH cover an expansive 53 per cent of the land and deforestation is low. However, physical planning to prevent reduction of agricultural land is poor. There is severe soil erosion in some areas, e.g. Herzegovina. In addition to all this, there are 1.2 million land mines and 2 million unexploded ordnances which limit the land available to use.

Figure 9. Energy intensity of the economy (2005) – kg og oil equivalent per USD 1000 of GDP



Source: World Resource Institute

Figure 10. CO2 emissions: level and growth (2009)



Source: The Little Green Data Book 2009

In view of the increasing evidence that the impact of climate change on economies and livelihoods will be both pervasive and rapid, the exposure to the impact of climate change and measures taken to adapt to these should arguably be included as a third key aspect of sustainability. It was decided by the workshop participants that future strategies should be taking the issue of sustainability into consideration and must encourage the use of environmentally-friendly technologies. A shift to a more environmentally friendly and energy efficient pattern of economic growth must take place. This is important not only to make growth more sustainable and less damaging, but also due to the increasing importance the issue of environmental sustainability is given to internationally, and by the EU in particular. With eyes upon inclusion into the European Union, BiH must improve its track record in this area.

6. Poverty and inequality

Data on poverty and economic inequality in BiH suffer from problems of reliability as well as validity. Household budget surveys exist for 2001, in the form of a Living Standards Measurement Survey, and for 2004 and 2007 in the form of Household Budget Survey.⁵⁵ However, as the quality of the data in the 2001 survey is considered to be particularly poor and as they in large part are incompatible with the data in the subsequent surveys, no information from the 2001 survey was used in the present analysis. Unfortunately, the surveys do not include any information on incomes, thus potentially valuable information on sources of incomes and on employment-related income cannot be obtained. Due to this cross-checking of consumption data with income data is impossible, which makes it difficult to verify its reliability. In addition, there are concerns about the methodology for calculating the poverty line, which are discussed in the survey.⁵⁶ There are three alternative poverty lines presented, one of them being the preferred one while another was chosen for the sake of comparability with earlier surveys.

A comparison of the results from the Household Budget Surveys in 2004 and 2007 suggests that the incidence of poverty somewhat increased over the period (**Table 15**). This finding is hard to take at face value. The period in question saw respectable economic growth as well as an improvement of key labour market indicators, such as the employment rate. A breakdown of the data on entities casts further doubt on the validity of this finding. The exceedingly high increase in the incidence of poverty in the BD is simply too large to be credible, while the finding that the incidence of poverty increased in RS, but declined in the FBiH is at odds with the comparatively better economic performance in the former than in the latter. The only conclusions that may be drawn with some degree of certainty is that poverty remains a serious problem in BiH and that the fairly high economic growth in the years leading up to the economic crisis in 2008-09, did not seem to have had any substantial impact on it.

Table 15 Poverty incidence by entity and settlement type in 2004 and 2007

	<i>Rural and urban</i>		<i>Rural</i>		<i>Urban</i>	
	2004	2007	2004	2007	2004	2007
BiH	17.9	18.6	23.1	23.9	11.0	11.0
FBiH	18.5	17.4	25.2	23.6	10.8	9.9
RS	17.5	20.2	20.6	23.9	12.1	13.2
RD	7.9	25.0	13.8	32.5	1.1	16.5

Source: HBS (2007b).

The incidence of poverty displays a number of logical correlations with household demographic characteristics. In the first place, it is strongly linked to the size of the household. While only 10 per cent of the one-member-households and less than 15 per cent of the two to three member households live in poverty, almost a third of the households with five members or more are poor. Overall, the poverty incidence is lower in female-headed households than in households headed by men, but this is due to the fact that female-headed households tend to be smaller. When household size is held constant, it is found that female-headed households are more prone to be poor than households headed by

⁵⁵ The survey results can be found on web-site of the BiH Federal Office of Statistics (<http://www.fzs.ba>).

⁵⁶ HBS (2007b: 13-20).

men.⁵⁷ The poverty incidence also varies by age of the head of household. It is higher for the younger households, where the head is aged 25-49, than for households where the head is aged 50-64. This may well be due to a more favourable dependency ratio in the older households, but it may also to some extent reflect the difficulties of the young to get a firm foothold in the labour market.

Naturally, poverty is strongly linked to employment (**Table 16**). The incidence of poverty among household where the head of household is unemployed is almost twice as large as among households where the head of household has employment. More noteworthy, perhaps, is that even among the latter, more than 16 per cent are poor. While employment may be necessary to escape poverty, it does not always suffice. There is an overall deficit of not only employment, but also productive employment and decent work. BiH clearly still has a large number of the working poor. Transposing the poverty incidence among the household where the head is unemployed on total employment, a rough estimate suggests that there were some 120 – 150 thousand working poor in BiH in 2007.⁵⁸

Table 16. Poverty incidence by labour market status of the head of household, percentages

	<i>Employed</i>	<i>Unemployed</i>	<i>Pensioner</i>	<i>Other inactive</i>	<i>All categories</i>
BiH	16.4	26.8	17.3	22.2	18.6
FBiH	16.4	25.9	15.7	18.9	17.4
RS	16.0	27.6	19.8	27.1	20.2
BD	25.7	31.2	22.2	21.3	25.0

Source: HBS (2007b).

As expected, the nature and area of employment matter. Those with permanent employment are exposed to poverty to a much lesser extent than those who are self-employed or have other forms of, mainly temporary, employment (**Table 17**). What does come as a surprise is that the poverty incidence among those with other forms of employment, i.e. employees without permanent contracts, is as high as that for the unemployed. This points to the widespread existence of precarious employment, which is associated with the large informal economy. It also points to the need to broaden the focus on employment to one which in equal measure addresses the need to increase employment rates and create new jobs and the need to ensure that employment is productive, offer adequate returns to the workers and offers decent working conditions.

Table 17. Poverty incidence by status of employment of the head of household, percentages

	<i>Employer</i>	<i>Self-employed</i>	<i>Permanent employment</i>	<i>Other employment</i>	<i>Total</i>
BiH	10.5	21.1	15.3	28.3	18.2
FBiH	9.5	22.0	14.2	27.9	17.6
RS	11.6	19.1	16.9	28.1	18.6
BD	21.0	32.4	22.1	42.7	27.7

Source: HBS (2007b).

Remark: 'Other employment' refers to employees who did not have 'indefinite contracts'.

The incidences of poverty by sector of occupation of the head of household display a somewhat unexpected picture (**Table 18**). Not only is the poverty incidence above average among those working in

⁵⁷ HBS (2007b: 26-27).

⁵⁸ This figure was obtained by simply multiplying the number of people in employment in 2007 – 850,000 – with the poverty incidence (16.4 per cent). It is a proxy of the actual number, as it disregards the fact that the incidence of employment may vary between poor and non-poor households.

agriculture, but also among those working in construction and industry. By contrast, it is far below the average among those working in services. While the latter may reflect a rapid productivity growth in services (see A.3., Table 12a), the large difference between industry and the services sector is still remarkable. It suggests a need for further exploration to understand the causes for this difference.

Table 18. Poverty incidence by sector of employment of the head of household, percentages

	<i>Agriculture</i>	<i>Industry</i>	<i>Construction</i>	<i>Trade & transport</i>	<i>Other</i>	<i>All sectors</i>
BiH	25.3	21.0	26.6	11.4	10.4	18.2
FBiH	26.1	20.2	26.9	11.0	9.7	17.6
RS	24.1	22.3	24.3	11.2	11.6	18.6
BD	40.3	23.3	45.6	24.6	12.3	27.7

Source: HBS (2007b).

Education is arguably the single most important factor influencing the exposure to poverty. The incidence of poverty decreases sharply with the level of education of the head of household (Table 19). This strong link between education and freedom from poverty goes via the labour market. As shown in some detail above (Figure 3) labour market access and access to high quality jobs increases significantly with the level of education, although there are important gender differences in this regard. The figures in Table 19 reinforce the conclusion that access to high quality education beyond the primary level is crucial.

Table 19. Poverty incidence by level of education of the head of household, percentages.

	<i>No education</i>	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>All levels</i>
BiH	33.3	24.2	15.5	3.2	18.6
FBiH	30.2	24.1	14.7	3.2	17.4
RS	38.4	23.8	16.5	3.4	20.2
BD	19.6	32.1	23.3	5.0	25.0

Source: HBS 2007b, p. 70

The results of the 2007 Household Budget Survey suggest that economic inequality, measured in terms of consumption, remain within reasonable limits and may even have fallen in recent year (Table 20). The *Gini* coefficient of consumption apparently fell from 0.36 to 0.33 between 2004 and 2007. In 2007 the *Gini* coefficient of consumption was 0.34 and 0.33 in urban and in rural areas, respectively, suggesting relatively small rural – urban differences.⁵⁹ The overall *Gini* coefficient of consumption is higher than that of most countries in the EU, but more or less at the level found in neighbouring countries.⁶⁰ However, it should be noted that the figures refer to consumption and not income. Both private (in particular remittances from abroad) and public transfers are known to be an important source of revenue for many Bosnian households, although their distributional impact cannot be gauged from the available statistics. Similarly, it is impossible to estimate either absolute or relative size of income from labour, or the magnitude of inequality in this regard.

⁵⁹ HBS (2007b).

⁶⁰ UNDP (2009). Most countries in the EU have a *Gini* coefficient below 0.3, while it is somewhat higher than in BiH in Albania and Macedonia, but lower in Serbia and Croatia.

Table 20. Distribution of consumption by consumption quintiles, 2007

<i>Quintile</i>	<i>KM</i>	<i>% of median</i>	<i>% share of total</i>
1	2,211	45	2.9
2	2,952	60	7.2
3	3,572	73	12.7
4	4,194	86	19.2
5	4,904	100	26.8
6	5,765	118	35.6
7	6,807	139	46.1
8	8,198	167	58.6
9	10,810	221	74.2
10	17,767	362	100

Source: HBS (2007b: 42).

7. Conclusions

Expanding domestic demand - led by wage growth, remittance inflow and credit expansion - has been boosting economic recovery in recent years in BiH. The economy had grown at a respectable 5-6 per cent per annum in the pre-crisis years. This growth had not been at the cost of stability either, as inflation and macroeconomic fundamentals remained stable.

However, though this economic growth has been a positive trend, it was not sufficient to bring about a productive transformation in the country. The employment situation is bleak while a sectoral mismatch between employment and value added persists. Growth has also not taken into account the environmental costs involved, while political issues and fragmented markets continue to discourage business.

Although growth has helped bring down unemployment in recent years in BiH, the employment situation remains very difficult. According to the 2009 Labour Force Survey the employment rate is still no more than 40 per cent, far from the EU target of 70 per cent, and unemployment remains exceptionally high at 25 per cent. Almost half of the working-age population – here defined as persons aged 15-64 – do not participate in the labour force, and among those who do, one in four is unemployed. Unemployment is long-term - almost three-quarters of the unemployed have been out of work for more than two years. At 49 per cent, youth unemployment is rampant, which highlights the difficulty that not least the young face in trying to get a foothold on the labour market.

All these statistics show that a vast majority of people in BiH have not been able to even partake in the modest growth their country has experienced.

Wages remain low by EU and regional standards, which together with high unemployment induce people to migrate abroad for economic reasons. In 2007 there were still some 125,000 – 150,000 working poor – in the sense that despite having a job they did not earn enough to bring themselves and their dependants out of income poverty. Economic growth has not been sufficient to provide these people with opportunities to do so.

In the area of human resources development BiH still lags behind most of its European peers. The share of the adult population with higher, or even secondary, education trails that of most other countries in the region. There are also serious, but less documented, concerns about the quality and relevance of education and about the capacity of the educational system to impart high-quality skills and education.

BiH also suffers from a complex form of inequality. Economic inequality appears to be fairly high. In 2007 the *Gini* coefficient of consumption was estimated at 0.34, which though being higher than the EU-average, is rather in line with that of the neighbouring countries.⁶¹ A big divide exists between those who have access to productive employment and those who do not. This divide is intertwined with prominent gender inequality in access to employment and economic opportunities. Women participate in the labour market to a much lesser extent than men and are more likely to be unemployed. It would seem that this

⁶¹ However, in the absence of any reliable data on incomes, an analysis of income distribution and income inequality is practically impossible. It may well be that income from employment is a more unequal than the *Gini* coefficient of consumption suggests, as public and private transfers are known to be important sources of income in many Bosnian households.

marked inequality is largely due to inequality of opportunities, though differences in educational attainment and other attributes to affect employability as well.

Key policy suggestions

During the workshop, these issues were discussed in detail and the most pressing policy requirements were put forward. The discussions were organized per the diagnostic tree, with the first part focussing on the **rate and quality of economic growth**. In this area, the participants put forward many policy options related to *governance* such as institutional strengthening, stricter controls against corruption, and reduction of administrative barriers to entrepreneurship harmonization of regulations and policies of the entities, districts and cantons. Among *financial reforms* in the aftermath of the crisis, it was suggested that the central bank of BiH should become a key player in determining rules of financial operations and setting up of lower rates of interest by development banks as a countermeasure against high interest rates charged by foreign banks. Policies to *boost entrepreneurship* included infrastructure development, creation of economic zones and provision of direct support to SMEs. It was also felt that employer's organizations can play a role in capacity building for entrepreneurs.⁶²

It was felt that future growth, however, must be *responsible to the environment*, as discussed under the header of **sustainability**, especially as inclusion to the EU would bring about more stringent requirements of operation of industry. High energy intensity and high levels of emissions were a source of worry to the participants.

Sustained high rates of economic growth will be needed to utilise the full potential of human resource base and to gradually close the gap compared to the most EU countries in the labour market. This was the third area of emphasis, as designated by the tree – the **utilization of human resources**. The dismal statistics on employment rates, unemployment and labour force participation touched a strong cord with the workshop participants.

Data from labour market and household budget surveys suggest that education is the single most important factor determining the prospects of young people to attain productive employment and escape the risks of unemployment and poverty. *Equal access to high quality education and skills training* at all levels were therefore recognized to be of paramount importance. Recommendations on functioning of VET and LLL were put forward.⁶³ The participants believed that such access needs to be affordable to all and merit-based. The quality of education must be improved to at least pre-transition levels and the emphasis must shift from attainment of qualifications to acquiring practical skills as required by the job market. The present educational system was thought to be unresponsive to labour market needs, which contributed to the structural nature of unemployment in the country. To the end of matching labour demand and education provision, *employment services* too were thought to be beneficial by making labour market needs more known.⁶⁴ Better *coordination* between employers and education institutes was thought to be vital. The participants stressed that the value of education should not be undermined by the lack of transparency and unfair competition, especially in awarding public sector jobs.

⁶² See **section 5.2** for greater detail on the participants' views on what has been constraining growth in BiH.

⁶³ For details, refer to **section 4.2**.

⁶⁴ See **section 3.3** for details.

Participants felt that low pay and unregulated work conditions in the private sector keep workers away from the labour force, encourage inactivity and are detrimental to productivity. This situation is allowed for by *social benefits*, which are low but have many beneficiaries, but also by remittances by Bosnians working abroad. It was felt by some that the contributions to unemployment paid by those working were already too high and should not be increased.

The gender dimension was strong at the workshop. Structural factors related to gender inequality – easy access to childcare, and maternity leaves and benefits' implementation – were found to be easier to address than cultural ones. Other than lower educational attainment, women also faced a *glass-ceiling* at the workplace that hindered their progress, both of which were blamed on cultural reasons.

These were the policy suggestions that the participants put forwards to overcome what were identified as the main constraints to productive employment in BiH. However, the main issue arising from the discussions, and one that was repeated over and over again, was the poor utilisation of the country's human resources, which is particularly worrisome as the population is rapidly ageing and will most probably contract at an increasing pace in the years to come.

The ravages of the war and very low fertility rates combined with high rates of migration abroad have resulted in low birth rates and small cohorts of children and youth in the population. While the share of children (aged below 15) in the population has fallen from 34 per cent in 1971 to 15 per cent in 2007, the share of elderly (aged 65 and more) has increased. This rapid ageing of the population is set to continue in foreseeable future. As the number of old people increases at the same time as the number of young entrants into the labour force declines, the dependency ratio, that is the number of mouths that each breadwinner needs to feed, will deteriorate. Higher productivity, resulting in higher incomes from labour, and a much higher employment rates and better utilisation of the working age population, will be needed not only to maintain material standards of living, but to keep them from falling in the years to come.

However, the somewhat gloomy picture that emerges from above-said needs to be put in its proper perspective. Few, if any, countries in Europe have faced such daunting development challenges as BiH as it emerged from a devastating conflict in the mid-1990s. BiH has had to address the dual challenges of building a new country that meets the standards of the peer European countries, and of profound economic and societal transformation to become a modern and competitive market economy. Societal and institutional development that has taken place over centuries in other countries has to be achieved in the course of decades here. For BiH this has been and remains a race against time. It is only appropriate that the present situation, with all the obvious shortcomings, is assessed not only in terms of what remains to be achieved, but also from the perspective what has already been achieved.

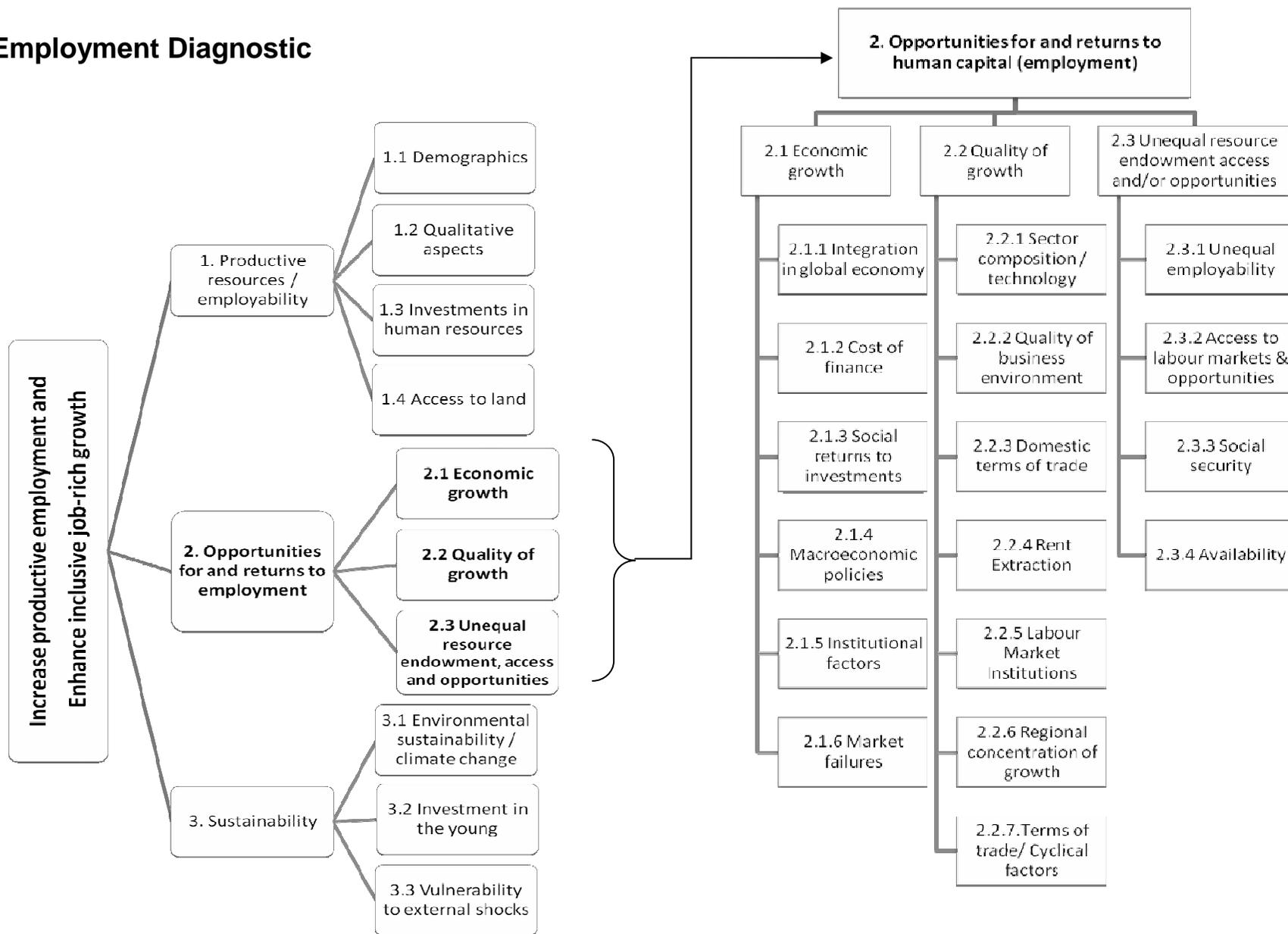
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Appendices

A.1. Employment Diagnostic Tree



A.2. Decomposition of the GDP growth from labour perspective

GDP per capita can be expressed as:

$$\frac{GDP_t}{Population_t} = \frac{WorkingAgePopulation_t}{Population} * \frac{LabourForce_t}{WorkingAgePopulation_t} * \frac{Employment_t}{LabourForce_t} * \frac{GDP_t}{Employment_t}$$

Or

$$G_t = S_t * A_t * E_t * P_t$$

If we take log differences, this will show us that change in GDP per capita is a summation of change in the following:

1. Age structure, S_t
2. Activity rate, A_t
3. Employment rate, E_t
4. Labour productivity, P_t

Reason

When we take log differences, we do the following:

$$G_t = S_t * A_t * E_t * P_t$$

Taking logs,

$$\log G_t = \log S_t + \log A_t + \log E_t + \log P_t$$

We can represent this by

$$g_t = s_t + a_t + e_t + p_t$$

We have the same for the period $t - 1$,

$$g_{t-1} = s_{t-1} + a_{t-1} + e_{t-1} + p_{t-1}$$

So we can subtract the above two equations to get log differences,

$$g_t - g_{t-1} = s_t - s_{t-1} + a_t - a_{t-1} + e_t - e_{t-1} + p_t - p_{t-1}$$

And we know that:

$$\begin{aligned}
g_t - g_{t-1} &= \log G_t - \log G_{t-1} = \log \left\{ \frac{G_t}{G_{t-1}} \right\} \\
&= \log \left\{ \frac{G_t}{G_{t-1}} - 1 + 1 \right\} \\
&= \log \left\{ \frac{G_t - G_{t-1}}{G_{t-1}} + 1 \right\} \\
&\cong \frac{G_t - G_{t-1}}{G_{t-1}}
\end{aligned}$$

If we do the same for all the other terms in the equation in 3., we get that,

$$\frac{G_t - G_{t-1}}{G_{t-1}} = \frac{S_t - S_{t-1}}{S_{t-1}} + \frac{A_t - A_{t-1}}{A_{t-1}} + \frac{E_t - E_{t-1}}{E_{t-1}} + \frac{P_t - P_{t-1}}{P_{t-1}}$$

Or that change in GDP per capita is a sum of change in labour productivity, employment, labour force participation/activity rate and age structure.

What this means for organization of data

When we study growth from a labour perspective, we can take this accounting identity into account and study statistics in the following order:

- Change in the age structure , which is $\frac{S_t - S_{t-1}}{S_{t-1}}$
- Change in the activity rate, which is $\frac{A_t - A_{t-1}}{A_{t-1}}$
- Change in employment levels, which is $\frac{E_t - E_{t-1}}{E_{t-1}}$
- Change in labour productivity, which is $\frac{P_t - P_{t-1}}{P_{t-1}}$
- Change in GDP per capita $\frac{G_t - G_{t-1}}{G_{t-1}}$ and the above variables' relative contribution to it.

A.3. Tables

**Dependency ratio actual:* Total non-employed population divided by the employed population
Dependency ratio, age based: Non-working age population (under 15 and 65 and over) divided by the working age population
Activity rate: Labour force divided by working age population * 100
Employment rate: Employed divided by working age population * 100
Unemployed rate: Unemployed divided by labour force * 100

Table 1. Participation in the labour force by age groups and sex, BiH, 2009

<i>Age</i>	15-24	25-49	50-64	15-64
Working age population (000)	432	1040	617	2088
men	223	515	294	1031
women	209	525	323	1057
In labour force (000)	141	718	251	1132
men	90	438	162	703
women	51	280	89	428
Employed (000)	72	556	210	838
men	48	347	133	528
women	24	209	76	309
Unemployed	69	162	42	273
men	42	91	29	162
women	27	70	13	110
Inactive (000)	291	322	365	978
men	133	76	131	340
women	158	246	234	638
<i>Age</i>	15-24	25-49	50-64	15-64
Activity rate (%)	33	69	41	54
men	40	85	55	68
women	24	53	28	40
Employment rate (%)	17	53	34	40
men	22	67	45	51
women	11	40	24	29
Unemployment rate (%)	49	23	17	24
men	47	21	18	23
women	53	25	15	26

<i>Age</i>	<i>15-24</i>	<i>25-49</i>	<i>50-64</i>	<i>15-64</i>
Working age population (000)	291	676	373	1339
men	145	332	177	655
women	145	344	195	685
In labour force (000)	92	442	131	665
men	58	279	90	427
women	34	163	41	237
Employed (000)	42	337	112	492
men	28	217	77	322
women	14	120	36	170
Unemployed	50	105	19	173
men	30	62	14	106
women	19	43	5	67
Inactive (000)	199	235	241	675
men	87	53	87	227
women	112	181	154	447
<i>Age</i>	<i>15-24</i>	<i>25-49</i>	<i>50-64</i>	<i>15-64</i>
Activity rate (%)	32	65	35	50
men	40	84	51	65
women	23	47	21	35
Employment rate (%)	14	50	30	37
men	19	65	44	49
women	10	35	18	25
Unemployment rate (%)	54	24	15	26
men	52	22	16	25
women	56	26	12	28

<i>Age</i>	<i>15-24</i>	<i>25-49</i>	<i>50-64</i>	<i>15-64</i>
Working age population (000)	134	344	233	711
men	74	173	111	357
women	60	172	122	353
In labour force (000)	47	265	116	428
men	30	152	70	252
women	17	113	46	176
Employed (000)	29	211	94	334
men	19	124	55	198
women	9	86	39	135
Unemployed	18	54	22	94
men	11	28	15	53
women	7	26	7	40
Inactive (000)	87	79	116	283
men	44	21	41	106
women	44	59	75	178
<i>Age</i>	<i>15-24</i>	<i>25-49</i>	<i>50-64</i>	<i>15-64</i>
Activity rate (%)	35	77	50	60
men	41	88	63	71
women	28	66	38	50
Employment rate (%)	22	61	40	47
men	26	72	50	55
women	15	50	32	38
Unemployment rate (%)	38	20	19	22
men	37	18	21	21
women	41	23	15	23

Table 1a Participation in the labour force by age groups and by sex. 2006-2009 BiH

TOTAL																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	495	485	447	432	165	162	148	141	62	67	78	72	103	95	70	69	330	323	299	291
25-49	1172	1155	1096	1040	774	774	752	718	546	564	586	556	228	210	166	162	398	381	345	322
50-64	576	595	577	617	211	231	234	251	176	190	198	210	35	41	35	42	365	364	343	365
15-64	2242	2235	2120	2088	1149	1167	1134	1110	784	821	862	838	366	346	272	272	1093	1068	986	978
TOTAL	2733	2725	2649	2594	1177	1196	1162	1132	811	850	890	859	366	347	272	272	1556	1529	1486	1463
MALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	254	248	236	223	102	101	94	90	40	45	52	48	61	56	42	42	152	147	141	133
25-49	589	574	541	515	482	483	461	438	353	365	372	347	129	117	88	91	107	92	81	76
50-64	267	285	271	294	142	158	155	162	118	129	130	133	24	29	25	29	124	127	116	131
15-64	1109	1107	1048	1031	726	742	710	691	512	593	554	528	214	202	156	163	383	366	338	340
TOTAL	1322	1317	1278	1252	743	760	729	703	528	557	573	541	215	203	156	163	579	557	549	549
FEMALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	241	236	211	209	63	61	54	51	22	22	26	24	42	38	28	27	178	176	157	158
25-49	583	581	555	525	292	292	291	280	192	199	213	209	99	93	77	70	292	289	164	246
50-64	309	311	305	323	68	74	79	89	58	61	68	76	10	12	10	13	241	237	227	234
15-64	1133	1128	1071	1057	423	426	423	419	272	282	307	310	151	143	116	110	710	702	648	638
TOTAL	1410	1408	1371	1342	434	436	433	428	283	292	317	318	151	144	116	110	976	972	938	314

Table 1b. Participation in the labour force by age groups and by sex. 2006-2009 in BiH. Percentages.

TOTAL

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	33	33	33	33	13	14	17	17	62	59	47	49
<i>25-49</i>	66	67	69	69	47	49	53	53	29	27	22	23
<i>50-64</i>	37	39	41	41	31	32	34	34	17	18	15	17
<i>15-64</i>	51	52	53	53	35	37	41	40	32	30	24	25
TOTAL	43	44	44	44	30	31	34	33	31	29	23	24

MALE

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	40	41	40	40	16	18	22	22	60	55	45	47
<i>25-49</i>	82	84	85	85	60	64	69	67	27	24	19	21
<i>50-64</i>	53	55	57	55	44	45	48	45	17	18	16	18
<i>15-64</i>	65	67	68	67	46	54	53	51	29	27	22	24
TOTAL	56	58	57	56	40	42	45	43	29	27	21	23

FEMALE

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	26	26	26	24	9	9	12	11	67	62	52	53
<i>25-49</i>	50	50	52	53	33	34	38	40	34	32	26	25
<i>50-64</i>	22	24	26	28	19	20	22	24	15	16	13	15
<i>15-64</i>	37	38	39	40	24	25	29	29	36	34	27	26
TOTAL	31	31	32	32	20	21	23	24	35	33	27	26

Table 1.1a. Participation in the labour force by age groups and by sex. 2006-2009 FBIH

TOTAL																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	337	326	298	291	112	104	98	92	37	38	47	42	75	66	51	50	225	222	201	199
25-49	760	757	719	676	498	489	468	442	351	352	362	337	146	137	106	105	262	268	250	235
50-64	347	353	349	373	112	121	128	131	103	100	109	112	18	21	19	19	225	232	221	241
15-64	1443	1437	1366	1339	731	714	694	665	492	490	518	492	239	224	176	173	711	722	672	675
TOTAL	1718	1708	1661	1619	740	722	703	674	500	498	528	201	240	225	176	173	977	985	957	945
MALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	173	167	158	145	68	64	63	58	24	25	31	28	45	40	32	30	105	103	95	87
25-49	376	371	347	332	315	312	292	279	232	235	234	217	82	76	58	62	62	59	55	53
50-64	159	167	163	177	85	86	88	90	72	70	74	77	12	16	14	14	74	81	75	87
15-64	708	705	668	655	467	462	443	427	328	330	339	322	139	131	104	106	241	243	225	227
TOTAL	827	822	796	777	473	467	449	433	333	336	345	327	139	132	104	106	354	354	347	344
FEMALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	164	160	141	145	44	40	35	34	14	13	16	14	30	27	19	19	120	120	106	112
25-49	383	386	372	344	183	178	176	163	119	117	128	120	64	61	48	43	200	209	195	181
50-64	188	186	186	195	37	35	40	41	31	30	35	36	6	5	5	5	151	151	146	154
15-64	735	732	698	685	264	253	251	237	164	160	179	170	100	93	72	67	471	479	447	447
TOTAL	891	886	864	842	268	255	254	241	167	162	182	174	100	93	72	67	623	631	610	600

Table 1.1b. Participation in the labour force by age groups and by sex. 2006-2009 in FBiH. Percentages.

TOTAL

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	33	32	33	32	11	12	16	14	67	63	52	54
<i>25-49</i>	66	65	65	65	46	46	50	50	29	28	23	24
<i>50-64</i>	32	34	37	35	30	28	31	30	16	17	15	15
<i>15-64</i>	51	50	51	50	34	34	38	37	33	31	25	26
TOTAL	43	42	42	42	29	29	32	12	32	31	25	26

MALE

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	39	38	40	40	14	15	20	19	66	63	51	52
<i>25-49</i>	84	84	84	84	62	63	67	65	26	24	20	22
<i>50-64</i>	53	51	54	51	45	42	45	44	14	19	16	16
<i>15-64</i>	66	66	66	65	46	47	51	49	30	28	23	25
TOTAL	57	57	56	56	40	41	43	42	29	28	23	24

FEMALE

Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
<i>15-24</i>	27	25	25	23	9	8	11	10	68	68	54	56
<i>25-49</i>	48	46	47	47	31	30	34	35	35	34	27	26
<i>50-64</i>	20	19	22	21	16	16	19	18	16	14	13	12
<i>15-64</i>	36	35	36	35	22	22	26	25	38	37	29	28
TOTAL	30	29	29	29	19	18	21	21	37	36	28	28

Table 1.2a. Participation in the labour force by age groups and by sex. 2006-2009 in RS

TOTAL																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	150	151	141	134	50	56	49	47	24	29	30	29	26	27	19	18	99	95	93	87
25-49	393	379	358	344	263	272	271	265	186	204	215	211	77	68	56	54	130	107	87	79
50-64	218	233	218	233	86	107	102	116	70	88	87	94	16	20	16	22	132	126	115	116
15-64	760	762	717	711	399	435	422	428	280	320	332	334	119	115	90	94	361	327	295	283
TOTAL	964	969	938	927	417	455	441	439	298	340	350	345	119	115	90	94	546	514	498	488

MALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	76	77	74	74	32	36	30	30	16	20	20	19	15	16	10	11	45	41	44	44
25-49	202	194	185	173	159	163	161	152	115	125	133	124	44	38	28	28	43	31	24	21
50-64	103	113	103	111	56	70	65	70	44	57	54	55	12	13	11	15	47	43	38	41
15-64	381	384	362	357	246	268	256	252	175	202	207	198	71	67	49	53	135	115	106	106
TOTAL	470	471	457	451	258	281	269	259	186	214	220	205	71	67	49	53	213	190	189	193

FEMALE																				
Labour force																				
Age groups	Working age population				Total				Employed persons				Unemployed persons				Inactive			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	73	74	67	60	19	20	18	17	8	9	9	9	11	11	9	7	55	53	49	44
25-49	191	185	173	172	104	109	110	113	71	79	83	86	33	30	27	26	87	76	63	59
50-64	115	120	114	122	30	37	38	46	26	31	32	39	4	7	5	7	85	82	77	75
15-64	379	378	355	353	153	166	166	176	105	119	125	135	48	48	41	40	226	212	189	178
TOTAL	493	498	481	476	160	174	172	180	112	126	131	140	48	48	41	40	333	324	309	295

Table 1.2b. Participation in the labour force by age groups and by sex. 2006-2009 in RS ('000)												
TOTAL												
Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	33	37	35	35	16	19	21	22	52	48	39	38
25-49	67	72	76	77	47	54	60	61	29	25	21	20
50-64	39	46	47	50	32	38	40	40	19	19	16	19
15-64	53	57	59	60	37	42	46	47	30	26	21	22
TOTAL	43	47	47	47	31	35	37	37	29	25	20	21
MALE												
Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	42	47	41	41	21	26	27	26	47	44	33	37
25-49	79	84	87	88	57	64	72	72	28	23	17	18
50-64	54	62	63	63	43	50	52	50	21	19	17	21
15-64	65	70	71	71	46	53	57	55	29	25	19	21
TOTAL	55	60	59	57	40	45	48	45	28	24	18	20
FEMALE												
Age groups	Activity rate				Employment rate				Unemployment rate			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
15-24	26	27	27	28	11	12	13	15	58	55	50	41
25-49	54	59	64	66	37	43	48	50	32	28	25	23
50-64	26	31	33	38	23	26	28	32	13	19	13	15
15-64	40	44	47	50	28	31	35	38	31	29	25	23
TOTAL	32	35	36	38	23	25	27	29	30	28	24	22

Source: LFS (2008, 2009)

Activity rate: Labour force divided by working age population * 100

Table 2. Participation in the labour force, BiH, total.

Both sexes	2006	2007	2008	2009
Total population (000)	3372	3315	3211	3129
Working age population 15-64 (000)	2242	2235	2120	2088
Labour force (000)	1149	1167	1134	1110
Employed (000)	784	821	862	838
Unemployed (000)	366	346	272	272
Inactive (000)	1093	1068	986	978
Discouraged (000)	102	92	62	58
Registered Unemployed*	525	518	483	510
Dependency ratio, actual (%)	3,3	3,0	2,7	2,7
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	51,2	52,2	53,5	53,2
Employment rate (%)	35,0	36,7	40,7	40,1
Unemployment rate (%)	31,9	29,6	24,0	24,5
Registered Unemployment rate (%)	45,7	44,4	42,6	45,9

Table 2a. Participation in the labour force, BiH. Total, by sex

Men	2006	2007	2008	2009
Total population (000)	1646	1613	1566	1523
Working age population 15-64 (000)	1109	1107	1048	1031
Labour force (000)	726	742	710	691
Employed (000)	512	539	554	528
Unemployed (000)	214	202	156	163
Inactive (000)	383	366	338	340
Discouraged (000)	51	44	27	23
Registered Unemployed*		270	237	254
Dependency ratio, actual (%)	2,2	2,0	1,8	1,9
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	65,5	67,0	67,7	67
Employment rate (%)	46,2	48,7	52,9	51,2
Unemployment rate (%)	29,5	27,2	22,0	23,6
Registered Unemployment rate (%)		36,4	33,4	36,8
Women	2006	2007	2008	2009
Total population (000)	1726	1703	1645	1605
Working age population 15-64 (000)	1133	1128	1071	1057
Labour force (000)	423	426	423	419
Employed (000)	272	282	307	310
Unemployed (000)	151	143	116	110
Inactive (000)	710	702	648	638
Discouraged (000)	51	48	35	35
Registered Unemployed*		248	246	256
Dependency ratio, actual (%)	5,3	5,0	4,4	4,2
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	37,3	37,8	39,5	40
Employment rate (%)	24,0	25,0	28,7	29,3
Unemployment rate (%)	35,7	33,6	27,4	26,3
Registered Unemployment rate (%)		58,2	58,2	61,1

Table 2.1. Participation in the labour force, FBiH, total

	2006	2007	2008	2009
Total population (000)	2141	2101	2043	1974
Working age population 15-64 (000)	1443	1437	1366	1339
Labour force (000)	731	714	694	665
Employed (000)	492	490	518	492
Unemployed (000)	239	224	176	173
Inactive (000)	711	722	672	675
Discouraged (000)	53	52	36	32
Registered Unemployed*				
Dependency ratio, actual (%)	3,4	3,3	2,9	3,0
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	50,7	49,7	50,8	49,7
Employment rate (%)	34,1	34,1	37,9	36,7
Unemployment rate (%)	32,7	31,4	25,4	26,0
Registered Unemployment rate (%)				

Table 2.1a. Participation in the labour force, FBiH. Total, by sex

<i>Men</i>	2006	2007	2008	2009
Total population (000)	1039	1016	992	955
Working age population 15-64 (000)	708	705	668	655
Labour force (000)	467	462	443	427
Employed (000)	328	330	339	322
Unemployed (000)	139	131	104	106
Inactive (000)	241	243	225	227
Discouraged (000)	26	26	15	14
Registered Unemployed*				
Dependency ratio, actual (%)	2,2	2,1	1,9	2,0
Dependency ratio, age-based (%)	0,5	0,4	0,5	0,5
Activity rate (%)	66,0	65,5	66,3	65
Employment rate (%)	46,3	46,8	50,7	49,2
Unemployment rate (%)	29,8	28,4	23,5	24,8
Registered Unemployment rate (%)				
<i>Women</i>	2006	2007	2008	2009
Total population (000)	1102	1085	1051	1019
Working age population 15-64 (000)	735	732	698	685
Labour force (000)	264	253	251	237
Employed (000)	164	160	179	170
Unemployed (000)	100	93	72	67
Inactive (000)	471	479	447	447
Discouraged (000)	27	26	21	19
Registered Unemployed*				
Dependency ratio, actual (%)	5,7	5,8	4,9	5,0
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	35,9	34,6	36,0	35
Employment rate (%)	22,3	21,9	25,6	24,8
Unemployment rate (%)	37,9	36,8	28,7	28,3
Registered Unemployment rate (%)				

Table 2.2. Participation in the labour force, RS, total

	2006	2007	2008	2009
Total population (000)	1168	1155	1109	1096
Working age population 15-64 (000)	760	762	717	711
Labour force (000)	399	435	422	428
Employed (000)	280	320	332	334
Unemployed (000)	119	115	90	94
Inactive (000)	361	327	295	283
Discouraged (000)	46	37	24	24
Dependency ratio, actual (%)	3,2	2,6	2,3	2,3
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	52,5	57,1	58,9	60,2
Employment rate (%)	36,8	42,0	46,3	47,0
Unemployment rate (%)	29,8	26,4	21,3	22,0
Registered Unemployment rate (%)				

Table 2.2a. Participation in the labour force, RS, by sex

<i>Men</i>	2006	2007	2008	2009
Total population (000)	576	568	545	538
Working age population 15-64 (000)	381	384	362	357
Labour force (000)	246	268	256	252
Employed (000)	175	202	207	198
Unemployed (000)	71	67	49	53
Inactive (000)	135	115	106	106
Discouraged (000)	24	16	11	8
Dependency ratio, actual (%)	2,3	1,8	1,6	1,7
Dependency ratio, age-based (%)	0,5	0,5	0,5	0,5
Activity rate (%)	64,6	69,8	70,7	71,1
Employment rate (%)	45,9	52,6	57,2	55,5
Unemployment rate (%)	28,9	25,0	19,1	21,0
Registered Unemployment rate (%)				
<i>Women</i>	2006	2007	2008	2009
Total population (000)	592	587	564	557
Working age population 15-64 (000)	379	378	355	353
Labour force (000)	153	166	166	176
Employed (000)	105	119	125	135
Unemployed (000)	48	48	41	40
Inactive (000)	226	212	189	178
Discouraged (000)	22	21	13	16
Dependency ratio, actual (%)	4,6	3,9	3,5	3,1
Dependency ratio, age-based (%)	0,6	0,6	0,6	0,6
Activity rate (%)	40,4	43,9	46,8	50,0
Employment rate (%)	27,7	31,5	35,2	38,2
Unemployment rate (%)	31,4	28,9	24,7	22,7

Source: LFS (2008, 2009)

*Source: LEA

Table 3. Unemployment by duration of unemployment and sex, FBiH. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job			2
Less than 5 months	8	5	13
6-11 months	10	5	15
12-23 months	10	9	19
24-59 months	23	16	40
60-119 months	25	13	38
120 months and more	29	18	47
Total	106	67	173

Table 3a. Unemployment by duration of unemployment and sex, BiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job	1,2	0,1	0,8
Less than 5 months	7,4	8,3	7,7
6-11 months	9,2	7,3	8,5
12-23 months	9,8	11,9	10,7
24-59 months	21,5	25,7	23,2
60-119 months	23,3	20,2	22,1
120 months and more	27,6	26,6	27,2
Total	100	100	100

Source: LFS (2009: Table 13)

Table 3.1. Unemployment by duration of unemployment by sex, FBiH, (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job			2
Less than 5 months	8	5	13
6-11 months	10	5	15
12-23 months	10	9	19
24-59 months	23	16	40
60-119 months	25	13	38
120 months and more	29	18	47
Total	106	67	173

Table 3.1a. Unemployment by duration of unemployment and sex, FBiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job	0,0	0,0	1,2
Less than 5 months	7,5	7,5	7,5
6-11 months	9,4	7,5	8,7
12-23 months	9,4	13,4	11,0
24-59 months	21,7	23,9	23,1
60-119 months	23,6	19,4	22,0
120 months and more	27,4	26,9	27,2
Total	99	99	101

Source: LFS (2009: Table 13.1)

Table 3.2. Unemployment by duration of unemployment and sex, RS. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job			
Less than 5 months	4	3	7
6-11 months	5	3	7
12-23 months	6	4	10
24-59 months	11	11	22
60-119 months	13	9	22
120 months and more	15	10	25
Total	53	40	94

Table 3.2a. Unemployment by duration of unemployment and sex, RS. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Found job	0,0	0,0	0,0
Less than 5 months	7,5	7,5	7,4
6-11 months	9,4	7,5	7,4
12-23 months	11,3	10,0	10,6
24-59 months	20,8	27,5	23,4
60-119 months	24,5	22,5	23,4
120 months and more	28,3	25,0	26,6
Total	102	100	99

Source: based on LFS (2009: Table 13.2)

Source for Tables 4-4.2b: based on LFS (2008, 2009: Table 5-9, pp. 34—44)

Table 4. Educational attainment levels, 2009, BiH (000)

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>Total</i>
Working age population	1176	1234	184	2594
men	428	720	104	1252
women	748	514	80	1342
In labour force	259	736	137	1132
men	149	481	73	703
women	110	254	64	428
Employed	192	544	123	859
men	108	367	66	541
women	84	177	57	318
Unemployed	67	191	14	272
men	42	114	7	163
women	26	77	7	110
Inactive	917	499	47	1463
men	279	239	31	549
women	639	260	15	914

Table 4a. Educational attainment levels, 2009, BiH, percentages

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>All levels</i>
Working age population	45,3	47,6	7,1	100
men	34,2	57,5	8,3	100
women	55,7	38,3	6,0	100
In labour force	22,9	65,0	12,1	100
men	21,2	68,4	10,4	100
women	25,7	59,3	15,0	100
Employed	22,4	63,3	14,3	100
men	20,0	67,8	12,2	100
women	26,4	55,7	17,9	100
Unemployed	24,6	70,2	5,1	100
men	25,8	69,9	4,3	100
women	23,6	70,0	6,4	100
Inactive	62,7	34,1	3,2	100
men	50,8	43,5	5,6	100
women	69,9	28,4	1,6	100

Table 4b. Educational attainment levels, 2009, BiH, percentages

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
Working age population	100	100	100
men	100	100	100
women	100	100	100
In labour force	22,0	59,6	74,5
men	34,8	66,8	70,2
women	14,7	49,4	80,0
Employed	16,3	44,1	66,8
men	25,2	51,0	63,5
women	11,2	34,4	71,3
Unemployed	5,7	15,5	7,6
men	9,8	15,8	6,7
women	3,5	15,0	8,8
Inactive	78,0	40,4	25,5
men	65,2	33,2	29,8
women	85,4	50,6	18,8
Unemployment rate	25,9	26,0	10,2
men	28,2	23,7	9,6
women	23,6	30,3	10,9

Table 4.1. Educational attainment levels, 2009, FBiH (000)

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>Total</i>
Working age population	709	794	116	1619
men	241	471	64	777
women	467	323	51	842
In labour force	131	455	88	674
men	79	307	46	433
women	52	148	42	241
Employed	90	330	80	501
men	54	231	42	327
women	37	100	38	174
Unemployed	41	125	8	173
men	25	77	4	106
women	16	48	4	67
Inactive	577	339	28	945
men	162	164	18	344
women	415	175	10	600

Table 4.1a. Educational attainment levels, 2009, FBiH, percentages

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>All levels*</i>
Working age population	43,8	49,0	7,2	100
men	31,0	60,6	8,2	100
women	55,5	38,4	6,1	100
In labour force	19,4	67,5	13,1	100
men	18,2	70,9	10,6	100
women	21,6	61,4	17,4	100
Employed	18,0	65,9	16,0	100
men	16,5	70,6	12,8	100
women	21,3	57,5	21,8	101
Unemployed	23,7	72,3	4,6	101
men	23,6	72,6	3,8	100
women	23,9	71,6	6,0	101*
Inactive	61,1	35,9	3,0	100
men	47,1	47,7	5,2	100
women	69,2	29,2	1,7	100

Table 4.1b. Educational attainment levels, 2009, FBiH, percentages

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
Working age population	100	100	100
men	100	100	100
women	100	100	100
In labour force	18,5	57,3	75,9
men	32,8	65,2	71,9
women	11,1	45,8	82,4
Employed	12,7	41,6	69,0
men	22,4	49,0	65,6
women	7,9	31,0	74,5
Unemployed	5,8	15,7	6,9
men	10,4	16,3	6,3
women	3,4	14,9	7,8
Inactive	81,4	42,7	24,1
men	67,2	34,8	28,1
women	88,9	54,2	19,6
Unemployment rate	31,3	27,5	9,1
men	31,6	25,1	8,7
women	30,8	32,4	9,5

*Uncertain data available with the coefficient of variance being between 20%≤CV<30%

Table 4.2. Educational attainment levels, 2009, RS (000)

	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>Total</i>
Working age population	441	421	65	927
men	176	237	38	451
women	265	183	27	476
In labour force	122	270	47	439
men	66	167	26	259
women	56	103	22	180
Employed	98	206	41	345
men	51	131	23	205
women	46	75	19	140
Unemployed	25	63	6	94
men	15	35	3	53
women	10	28	3	40
Inactive	319	151	18	488
men	110	71	12	193
women	209	80	5	295

Table 4.2a. Educational attainment levels, 2009, RS, percentages				
	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>	<i>All levels*</i>
Working age population	47,6	45,4	7,0	100
men	39,0	52,5	8,4	100
women	55,7	38,4	5,7	100
In labour force	27,8	61,5	10,7	100
men	25,5	64,5	10,0	100
women	31,1	57,2	12,2	101*
Employed	28,4	59,7	11,9	100
men	24,9	63,9	11,2	100
women	32,9	53,6	13,6	100
Unemployed	26,6	67,0	6,4	100
men	28,3	66,0	5,7	100
women	25,0	70,0	7,5	103*
Inactive	65,4	30,9	3,7	100
men	57,0	36,8	6,2	100
women	70,8	27,1	1,7	100

Table 4.2b. Educational attainment levels, 2009, RS, percentages			
	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
Working age population	100	100	100
men	100	100	100
women	100	100	100
In labour force	27,7	64,1	72,3
men	37,5	70,5	68,4
women	21,1	56,3	81,5
Employed	22,2	48,9	63,1
men	29,0	55,3	60,5
women	17,4	41,0	70,4
Unemployed	5,7	15,0	9,2
men	8,5	14,8	7,9
women	3,8	15,3	11,1
Inactive	72,3	35,9	27,7
men	62,5	30,0	31,6
women	78,9	43,7	18,5
Unemployment rate	20,5	23,3	12,8
men	22,7	21,0	11,5
women	17,9	27,2	13,6

*

Uncertain data available with the coefficient of variance being between 20%≤CV<30%
Source for Tables 4-4.2b: based on LFS (2008, 2009: Table 5-9, pp. 34—44)

Table 5. Development of employment 2006-2009, value added and labour productivity and by sector 2005-2008

Employment (thousands)	2005	2006	2007	2008	2009
Agriculture		167	168	183	182
Industry		249	277	289	270
Services		395	404	418	406
Total		811	850	890	858

Value added (Convertible Marks, thousands)	2005	2006	2007	2008
Agriculture	1545175	1617714	1644079	1631705
Industry	3911334	4001400	4438127	5027616
<i>Manufacturing as a share of Industry</i>	1752372	1989250	2451520	2827418
<i>Construction as a share of Industry</i>	752023	829412	1058668	1340151
<i>Other as a share of Industry</i>	1406939	1182738	927939	860047
Services	9773961	10125430	10759654	11661015
Total	15230470	15744544	16841860	18320336

Labour Productivity (Convertible Marks per employee)	2006	2007	2008
Agriculture	9687	9786	8916
Industry	16070	16022	17397
Services	25634	26633	27897
Total	19414	19814	20585

Source: LFS (2006, 2009), National Accounts (2008)

Table 6. Sectoral decomposition of the economy and employment

GDP	Share in economy				Contribution to growth			
	Agriculture	Industry	Services	Total	Agriculture	Industry	Services	Total
2006	10,3	25,4	64,3	100	11,6	22,6	65,8	100
2007	9,8	26,3	63,9	100	5,9	33,4	60,7	100
2008	8,9	27,4	63,7	100	3,7	34,1	62,2	100
Employment								
2006	20,6	30,7	48,7	100	-	-	-	-
2007	19,8	32,6	47,5	99,9	2,6	73,7	23,7	100
2008	20,6	32,5	47	100,1	36,6	29,3	34,1	100

Source: National Accounts (2008)

Table 7. Sectoral composition of GDP, BiH

	2005	2006	2007	2008	
Agriculture	10,1	10,3	9,8	8,9	
Industry	25,7	25,4	26,4	27,4	
<i>Manufacturing</i>	11,5	12,6	14,6	15,4	
<i>Construction</i>	4,9	5,3	6,3	7,3	
<i>Other</i>	9,2	7,5	5,5	4,7	
Services	64,2	64,3	63,9	63,7	
Total	100	100	100	100	
Sector composition of employment	2005	2006	2007	2008	2009
Agriculture		20,6	19,8	20,6	21,2
Industry		30,7	32,6	32,5	31,5
Services		48,7	47,5	47,0	47,3
Total		100	100	100	100

Source: LFS (2006, 2009), National Accounts (2008)

Table 8. Indices of growth, employment and Value added. 2006=100

Employment	2006	2007	2008	2009
Agriculture	100	100,60	109,58	108,98
Industry	100	111,24	116,06	108,43
Services	100	102,28	105,82	102,78
Total	100	104,81	109,74	105,80
Value added index. 2006=100	2005	2006	2007	2008
Agriculture	95,52	100	101,63	100,86
Industry	97,75	100	110,91	125,65
Services	96,53	100	106,26	115,17
Total	96,73	100	106,97	116,36

Table 8a. Growth rate of Productivity 2006-08

Sector	2007	2008
Agriculture	1,031	-8,716
Industry	-0,331	9,582
Services	3,985	9,343
Total	2,161	6,619

Table 9. Sector contribution to GDP and employment growth 2006-08

	VA	Employment
Agriculture	0,5	20,3
Industry	39,8	50,6
Services	59,6	29,1
Total	100	100

Source: LFS (2006, 2009), National Accounts (2008)

Table 10. Sectoral contribution to growth

GDP	Agriculture	Industry	Services	Total
2006	11,6	22,6	65,8	100
2007	5,9	33,4	60,7	100
2008	3,7	34,1	62,2	100
Employment				
2006	-	-	-	-
2007	2,6	73,7	23,7	100
2008	36,6	29,3	34,1	100

Table 11. Employment elasticity 2006-2008

	2006	2008
Agriculture	1	11,08
Industry	1	0,63
Services	1	0,38
Total	1	0,60

Table 12. Labour force by employment status and sex, BiH. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	401	224	625
Self-employed	122	53	176
Unpaid family workers	17	41	58
All categories	540	318	859

Table 12a. Labour force by employment status and sex, BiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	74,3	70,4	72,8
Self-employed	22,6	16,7	20,5
Unpaid family workers	3,1	12,9	6,8
All categories	100	100	100

Source: LFS (2009: Table 6)

Table 12.1. Labour force by employment status and sex, FBiH. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	257	138	395
Self-employed	65	26	92
Unpaid family workers	5	9	14
All categories	327	174	501

Table 12.1a Labour force by employment status and sex, FBiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	78,6	79,3	78,8
Self-employed	19,9	14,9	18,4
Unpaid family workers	1,5	5,2	2,8
All categories	100	99	100

Source: LFS (2009: Table 6.1)

Table 12.2. Labour force by employment status and sex, RS. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	139	82	221
Self-employed	55	26	81
Unpaid family workers	12	31	43
All categories	205	140	345

Table 12.2a. Labour force by employment status and sex, RS. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Employees	67,8	58,6	64,1
Self-employed	26,8	18,6	23,5
Unpaid family workers	5,9	22,1	12,5
All categories	100	99	100

Source: based on LFS (2009: Table 6.2)

Table 13. Labour Force by economic sector and sex, BiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	19	26	21
Industry	40	16	31
Services	41	58	47
All industries	100	100	100

Source: LFS (2009: Table 7)

Table 13.1. Labour Force by economic sector and sex, FBiH. Percentages

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	12	16	14
Industry	44	18	35
Services	44	66	51
All industries	100	100	100

**Table 13.2. Labour Force by economic sector and sex, RS.
Percentages**

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	29	38	32
Industry	35	14	27
Services	36	48	41
All industries	100	100	100

Source: LFS 2009: Table 7.2)

Table 14. Part-time employment by industry and sex, BiH. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	24	30	54
Industry	12	3	15
Services	10	8	18
All industries	46	41	87

**Table 14.1. Part-time employment by industry and sex, FBiH.
(000)**

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	15	18	33
Industry	8	2	10
Services	6	5	11
All industries	29	25	54

Source: LFS (2009: Table 8.1)

Table 14.2. Part-time employment by industry and sex, RS. (000)

	<i>Men</i>	<i>Women</i>	<i>Both sexes</i>
Agriculture	9	13	22
Industry	4		5
Services	5	2	7
All industries	18	16	34

Source: LFS (2009: Table 8.2)

A.4. List of participants at the ILO workshop on employment diagnostic analysis, Neum, 27-29 September 2010

	Name	Institution/Organization
	Participants	
1.	Ms. Slavica VUCIC	Ministry of Civil Affairs of BiH
2.	Ms. Zorica KRSMANOVIC	Ministry of Civil Affairs of BiH
3.	Ms. Vjekoslava SKRBA	Ministry of Civil Affairs of BiH
4.	Ms. Mirela IBRAHIMAGIC	Directorate for Economic Planning of BiH
5.	Mr. Sinisa VESELINOVIC	Labour and Employment Agency of BiH
6.	Mr. Samir ZUKO	Labour and Employment Agency of BiH
7.	Mr. Milenko STOJANOVIC	Statistical Agency of BiH
8.	Ms. Dzana KADRIBEGOVIĆ	Federal Ministry of Labour and Social Policy of the Federation of
9.	Mr. Haris HUSKIC	Federal Employment Institute of the Federation of BiH
10.	Mr. Rajko KLICKOVIC	Ministry of Labour and Veterans Welfare of the Republika Srpska
11.	Mr. Djordje MARCETA	Employment Institute of the Republika Srpska
12.	Mr. Mladenko NENADIC	Employment Institute of the Brcko District of BiH
13.	Mr. Pero OBAD	Confederation of Trade Unions of BiH/SSSBIH
14.	Ms. Bozena RADOSEVIC	Confederation of Trade Unions of BiH/SSRS
15.	Mr. Ilija KALAJDZIC	Confederation of Trade Unions of BiH/SBD
16.	Ms. Aleksandra SIMIKIC	Employers' Association of BiH
17.	Mr. Mario VIGNJEVIC	SIDA - Swedish International Development Cooperation Agency
	Resource Persons	
26.	Dr. Sanja CRNKOVIC-POZAIC	
	Observers	
27.	Ms. Lejla SOMUN-KRUPALIJA	
	ILO Staff	
28.	Ms. Lejla TANOVIC	ILO DWT/CO Budapest - ILO Sarajevo
29.	Ms. Leyla SHAMCHIYEVA	ILO Geneva – Employment Sector
30.	Ms. Line BEGBY	ILO Geneva – Gender
31.	Ms. Mariangels FORTUNY	ILO Geneva – Employment Sector
32.	Ms. Natalia POPOVA	ILO DWT/CO Budapest
33.	Mr. Per RONNAS	ILO Geneva – Employment Sector
34.	Ms. Shagun KHARE	ILO Geneva – Employment Sector
	Interpreters	
36.	Ms. Divna JAKIC-SUBASIC	
37.	Ms. Leila KADRIBASIC	

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