Why is Unemployment so High in Bulgaria?

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ABSTRACT

The objective of this paper is to determine the main factors behind poor labor market outcomes in Bulgaria. Unemployment in Bulgaria is high and of long duration. The accumulation of the unemployment stock has been caused by relatively high inflows into unemployment coupled with limited outflows. These features of the Bulgarian labor market are quite typical of other transition economies of Central Europe and thus exploring their sources is broader interest. In looking for an explanation the paper focuses on determinants of and constraints to job creation. It uses data on job creation and job destruction coming from a survey of employment in all registered firms. The paper finds that the source of large inflows into unemployment is intensive enterprise restructuring associated with a high pace of job reallocation. However, job creation falls short of job destruction. Three main factors account for the limited job creation and hiring, and thus for low outflows from unemployment First, the unfriendly business environment, reflected in a low rate of new firm formation, and a relatively small SME sector. Second, labor market rigidities, including excessive hiring and firing costs. Third, skill and spatial mismatches brought about by enterprise restructuring, as well as low-skills and marginalization of the long-term unemployed, who cannot successfully compete for new jobs. The paper recommends a three pronged strategy to improve labor market performance. It comprises (i) removing bureaucratic constraints to entry and expansion of firms; (ii) enhancing labor market flexibility through lowering hiring and firing costs, and (iii) improving the educational system so as to equip workers with broad and portable skills.

INTRODUCTION

The objective of this paper is to examine possible factors behind weak labor market outcomes in Bulgaria. Is high and rising unemployment a result of poor macroeconomic performance and depressed demand? Bad investment climate and unfavorable business environment? Labor market policies and regulations detrimental to flexibility and inhibiting job creation? Or is high unemployment due to supply side factors, such a skill mismatches and lack of labor mobility?

The paper finds that high unemployment in Bulgaria can be largely accounted for by intensive enterprise restructuring coupled with unsatisfactory business environment and some labor market rigidities. An additional factor is limited capacity on the part of the unemployed to benefit from opportunities created by high job turnover due to skill mismatches. An enabling business environment, greater labor market flexibility and the educational system better suited to the needs of the labor market are thus key for better labor market outcomes and – more broadly – for Bulgaria's greater global competitiveness.

The paper is organized as follows. The first section sets the stage by presenting the problem: the low level of the utilization of labor resources in Bulgaria and substantial labor market slack. The second section looks at possible factors explaining high unemployment: macroeconomic developments and business environment, enterprise restructuring, skill mismatches, and labor market regulations. The final section presents main conclusions and policy implications.

I. HIGH AND RISING UNEMPLOYMENT

Unemployment in Bulgaria is high and rising. The duration of unemployment spells tends to be long, and consequently, the share of long-term unemployment has been very high, even by the standards of transition economies. In 2001 unemployment approached 20 percent, rising from a relatively low level of 12 percent in 1998 (Table 1). Over 60 percent of the unemployed have been jobless for more than one year. High

unemployment is just one symptom of the labor market stagnation. The labor force participation rate has been low and declining and as a result the employment-to-population ratio - the summary measure of the utilization of labor resources - reached its lowest level since the beginning of transition in 2001.

Table1 Labor force participation, employment and unemployment, 1995-2001
(percent)

	1995	1996	1997	1998	1999	2000	2001
Labor force participation rate	52.2	52.5	51.9	51.6	50.2	49.8	50.4
Employment rate	44.0	45.4	44.8	45.3	43.1	41.7	40.6
Unemployment rate	15.7	13.5	13.7	12.2	14.1	16.3	19.4
Share of long term unemployment	67.5	65.7	62.2	63.9	58.7		63.7

Notes:
1. June data
2. Labor force participation rate = (Employed + Unemployed)/Population aged 15+
3. Employment rate = Employed/Population aged 15+
4. Unemployment rate = Unemployed/Labor force
5. Long-term unemployment = duration of unemployment is one year or longer (including unknown duration).
Source: Employment and Unemployment, various years, NSI.

Low level of utilization of labor resources

The pattern of low employment prevailing in Bulgaria is similar to that observed in other high unemployment transition economies (e.g. Rutkowski, 2002). Its distinctive features include low employment of prime age men, relatively high employment of prime age women, and low labor force participation of younger and older workers.

The employment rate among prime age men in Bulgaria is substantially lower than the OECD average. In Bulgaria only 70 of the men aged 25-54 are employed, compared with close to 90 percent in the OECD (Table 2). This 20 percentage point differential illustrates best the degree of underutilization of labor resources in Bulgaria. It directly translates into lower output and higher poverty. High *unemployment* among the prime age men is one, although a dominant, reason for the low employment rate. The other reason is relatively low *labor force participation* of prime age man, likely to reflect to so called "discouraged worker" effect. Many working age men have ceased looking for a job because their efforts to find one have proved futile and they no longer believe

that they will succeed in finding a new job. Thus, not only do fewer prime age men have jobs in Bulgaria than in the OECD, but also fewer of them look for a job.

In strong contrast, the employment rate among prime age women is relatively high in Bulgaria, despite the high unemployment rate. Two-thirds of the prime age women are employed in Bulgaria, which is somewhat higher than in OECD. This is because of the high female labor force participation rate – 81 percent in Bulgaria against 68 percent in the OECD – which offsets the effect of high unemployment. Interestingly, the total female employment rate in Bulgaria is virtually as high as the male one, which is in contrast to OECD countries, where employment among men is substantially higher than among women. Thus high economic activity of Bulgarian women compensates, to some extent, the relatively low economic activity of men.

Another facet of underutilization of labor resources in Bulgaria is low labor force participation, and consequently the low employment rate, of young and older workers. Only one-fifth of young (up to 24 years of age) persons are employed in Bulgaria, compared with close to one-half in the OECD. Similarly, less than one-fourth of older workers (55 to 64) are employed in Bulgaria, compared with slightly below one-half in the OECD. This reflects labor market slack in Bulgaria, but probably also cultural norms as well as relatively lax rules governing the award of various non-work social benefits, e.g. disability pensions. Notwithstanding the reasons, low employment among young and older workers implies unutilized potential and negatively affects the standards of living.

Table 2 Unemployment, labor force participation and employment rates by age and gender: Bulgaria and OECD

	All workers				Men			Women		
	15 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
	Percentages									
Bulgaria (June 2001)										
Unemployment rate	20.0	39.0	17.5	18.8	34.9	16.5	19.4	34.9	16.5	19.4
Labor force participation rate	63.2	34.5	82.6	29.2	34.7	84.7	41.6	34.2	80.6	18.1
Employment rate	50.6	21.0	68.1	23.7	19.8	69.1	33.9	22.3	67.2	14.6
OECD (1999)										
Unemployment rate	6.4	11.8	5.4	5.2	11.7	4.9	5.6	11.9	6.1	4.6
Labor force participation rate	70.4	53.0	80.3	51.6	57.8	93.0	64.5	48.0	67.8	39.4
Employment rate	65.9	46.7	75.9	48.9	51.1	88.5	60.8	42.3	63.6	37.6

Source:
Bulgaria: Labor Force Survey, June 2001; Bank staff calculations.
OECD: Employment Outlook, 2000.

A particularly worrisome feature of Bulgarian unemployment is its long duration. An average (median) unemployed person looks for a job for about 2 years, which implies a considerable private and social cost.[1] Usually, long-term unemployment leads to poverty and social exclusion, and this tends to further undermine chances to find a new job. Long duration of unemployment spells indicates a stagnant labor market, where chances to escape unemployment are limited. On this count Bulgaria scores worse than most of transition economies of CEE, even those characterized by a comparable level of unemployment. For example, the share of long-term unemployment in Bulgaria (which exceeds 60 percent) is higher than in Lithuania, Poland and Slovakia (where it is at around 50 percent), which all are high unemployment countries. The majority of Bulgarian unemployed are marginalized, facing poor labor market prospects and the high risk of – possibly persistent – poverty.

Large flows into and low outflows from unemployment

Labor market prospects are best depicted by the so called transition matrixes, which show estimated probabilities that workers move across different labor force states, such as employment and unemployment. Large labor flows between employment and unemployment indicate a dynamic labor market, where there is a lot of both firing and hiring. Many workers lose their jobs, but they find it relatively easy to find a new one, thus their unemployment spells tend to be short. In contrast, limited labor flows point to a stagnant market, where few workers lose their jobs, but those who become unemployed have little chances to find new work. In such a case, unemployment is a stagnant pool, workers tend to stay jobless for a long time, with their chances to find a job gradually declining, often up to the point they become detached from the labor market.

At first sight, it may seem that the labor market in Bulgaria is in a state of flux, as there are considerable movements across labor force states taking place over a one year period (Table 3).[2]

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[1] This refers to the duration of *completed* unemployment spells, which on average are twice the duration of *uncompleted* spells (which are reported by official statistical sources).

[2] The analysis of labor flows draws on Kotzeva (2002).

Table 3 Transition probabilities across labor force states
(percentage of initial population)

Panel A

March, 2000	March, 2001		
	Employed	*Unemployed*	*Inactive*
Employed	83.4	9.3	7.3
Unemployed	22.1	37.4	40.5
Inactive	4.4	3.6	92.1

Panel B

March, 2000	June, 2001		
	Employed	*Unemployed*	*Inactive*
Employed	96.3	1.5	2.3
Unemployed	11.0	74.7	14.3
Inactive	2.7	3.3	94.0

Note: Yearly transition probabilities were calculated based on a retrospective question in the March 2001 survey (N=2253). Quarterly transition probabilities were calculated based on a panel consisting of persons who were covered by two consecutive waves of the survey (N=23000). See Annex 1A for details.

Source: Kotzeva (2002) using LFS data.

Upon closer inspection it turns out that these considerable labor flows in fact point to a depressed labor market. One witnesses negative dynamics, characterized by:

- large flows from employment to unemployment;
- limited outflows from unemployment to jobs;
- substantial flows from unemployment to inactivity.

These labor flows explain rising unemployment and the declining labor force participation rate. Large inflows into unemployment are not matched by proportionate outflows. About 9 percent of workers lost their jobs in 2000 and became unemployed. This proportion is high even by standards of transition economies of CEE, where the annual inflow rate into unemployment usually does not exceed 5 to 6 percent. At the same time, outflows from unemployment to jobs are in the lower end of the range characteristic of transition economies, and very low by the standards of dynamic market

economies. In Bulgaria only 22 percent of the unemployed found a job within a year, compared with about 35 percent in Poland. Thus, the prima facie reasons behind high and rising unemployment in Bulgaria is high inflows into unemployment, which coincide with low outflows from unemployment to work. This is in contrast to the model of a genuinely dynamic labor market, where high inflows into unemployment are matched by high outflows from unemployment to jobs.

Large flows from unemployment to inactivity indicate a substantial "discouraged worker" effect. Many unemployed in Bulgaria cease looking for a job, discouraged by the lack of job opportunities. The scale of this effect is startling: as much as 40 percent of the unemployed withdraw from the labor force within one year.[3] This is much more than in other high unemployment transition economies of CEE. For example, in Poland and Lithuania, only about 15 percent of the unemployed withdraw from the labor force within a year, and this proportion is still smaller in Slovakia (5 percent), (Rutkowski, 2002, World Bank 2001a and 2001b).

The large scale withdrawal from the labor force is a worrisome phenomenon. Contrary to common opinion, it does not ease labor market pressure. It does imply, however, that there is a large unutilized human capacity in Bulgaria. The magnitude of the problem is in Bulgaria larger than elsewhere. The labor force participation rate is lower in Bulgaria than in other high unemployment transition economies, with negative consequences for the output level and poverty. The exact reasons behind the low labor force participation rate in Bulgaria need to be further investigated. One possible explanation is relative generosity and accessibility of non-employment benefits (e.g. disability pensions).

[3] The magnitude of transitions from unemployment to inactivity may be overestimated, however, as the previous labor force status was determined based on respondents self-assessment. Some respondents who categorized themselves as unemployed one year earlier might in fact had been out of the labor force (if they were not actively looking for or not available for a job.

Less educated blue collar workers are most hit by unemployment

Some categories of workers are more affected by the labor market slack than others. The risk of losing a job and becoming unemployed is the highest for less educated men, especially with vocational or technical education. This risk does not seem to be significantly affected by urban/rural residence, nor by age (Table 4a). Specifically, men face an 11 percent probability of losing a job, compared with 8 percent for women. Workers with secondary or lower education are about two times as likely to lose a job as workers with tertiary education. Lower job stability among workers with lower educational attainment and with blue-collar occupations is a typical pattern among industrialized countries, and Bulgaria is no exception in this respect.

The best chances to escape unemployment and find a job have prime-age men with secondary or higher education, and those living in rural areas (Table 4b). For example, one in four workers aged 30-45 finds a new job within a year, compared with less than one in five workers less than 30 years of age. Workers with primary education find it particularly difficult to find a new job; their exit rate from unemployment is only 17 percent, compared with that of 26-28 percent for workers with secondary education. This is yet another indication that the Bulgarian labor market, like those in all industrialized countries, offers a premium for higher skills. Workers living in rural areas have somewhat higher chances to find employment than their urban counterparts: 24 against 21 percent. This difference is much more pronounced when one looks at quarterly transition rates, which indicates that rural jobs are frequently of temporary nature. Still, the rural labor market in Bulgaria seems to be more dynamic, characterized by higher labor turnover, than urban the one.[4]

[4] Labor market dynamism, as measured by worker flows, does not necessarily translate into higher incomes. Despite the fact that the rural labor market is somewhat more dynamic than the urban one in Bulgaria, the poverty rate is much higher in rural areas than in rural areas (World Bank 2002b). This can be explained by the nature of rural jobs, which are often seasonal, temporary, low-skilled and thereby low-paid. These kind of jobs do not lift families out of poverty and account for the phenomenon of "working poor".

Table 4a Yearly transition probabilities from employment by socio-demographic groups, March 2000 – March 2001.
(percentage of employment, beginning of period)

	Employed	Unemployed	Inactive
Total	*83.4*	*9.3*	*7.3*
Sex			
male	*83.3*	*10.6*	*6.1*
female	*84.1*	*7.9*	*7.9*
Residence			
urban	*84.0*	*9.2*	*6.8*
rural	*81.4*	*9.5*	*9.0*
Education	113.0	14.0	15.0
primary	*79.6*	*9.9*	*10.6*
secondary	*80.5*	*10.2*	*9.4*
secondary vocational	*80.8*	*11.6*	*7.6*
higher	*92.3*	*5.3*	*2.4*
Age			
under 30	*78.1*	*9.4*	*12.5*
30 – 45	*85.0*	*10.1*	*4.9*
46+	*84.2*	*8.3*	*7.5*

Source: Kotzeva (2002)

Table 4b Yearly transition probabilities from unemployment by socio-demographic groups, March 2000 – March 2001.
(percentage of employment, beginning of period)

	Employed	Unemployed	Inactive
Total	*22.1*	*37.4*	*40.5*
Sex			
male	*22.5*	*39.2*	*38.3*
female	*21.8*	*35.2*	*43.0*
Residence			
urban	*21.1*	*40.6*	*38.3*
rural	*23.9*	*32.1*	*44.0*
Education			
primary	*16.6*	*31.1*	*52.3*
secondary	*26.3*	*40.4*	*33.3*
	Employed	Unemployed	Inactive
secondary vocational	*27.6*	*40.7*	*31.7*
higher	*25.0*	*62.5*	*12.5*
Age			
under 30	*19.0*	*35.4*	*45.6*
30 – 45	*25.3*	*42.4*	*32.3*
46+	*22.1*	*32.7*	*45.2*

Source: Kotzeva (2002)

The most likely to withdraw from the labor force after experiencing unemployment are poorly educated women living in rural areas, either young or older. Poor educational attainment stands out as most closely associated with labor force withdrawal. For example, over one-half of the unemployed with primary education become economically inactive within one year, compared with about one-third of the unemployed with secondary education and less than one-tenth of those with tertiary education. Not surprisingly, prime age workers are significantly less likely to withdraw from the labor force than either younger or older workers. Still, the labor force withdrawal rate is very high in Bulgaria even among prime age workers.

Low job security with limited job opportunities

It is usually assumed that there is a trade-off between job security and the availability of job opportunities. High job stability and limited firing tend to go hand in hand with limited hiring and low chances to find a new job. Conversely, intense hiring and high chances to find a new job require high labor turnover, which comes at the cost of lower job security. Earlier analysis suggests that the risk of job loss has become relatively high in Bulgaria in recent years, while the chances to find a new job have been and still are limited. It seems that Bulgaria has not yet reaped the benefits of a flexible labor market.

To examine the issue of job security and job opportunities in more detail we looked at the distribution of job tenure. Short average job tenure indicates frequent changes of jobs, and thus is associated with less job security. At the same time, a large share of employees with short tenure points to intense hiring, and thus better chances to find a job. In contrast, long average job tenure implies job stability, but also implies worse job opportunities as the share of employees with short job tenure is low, implying limited hiring by employers.

The average duration of job tenure is relatively short in Bulgaria, which is a characteristic feature of virtually all transition economies (Table 6). It reflects the development of the new sector of the economy, which consists of private, usually small,

firms. At the same time, however, short job tenure points to frequent job changes and thus less job stability. These job changes are often involuntary, caused by lay-offs, and thus the shortening of the average job tenure is indicative of the diminished sense of job security.

Expectedly, private sector jobs are less secure than public sector jobs. In the private sector an average (median) worker has been with his current employer for less than four years, while in the public sector the median tenure is considerably longer (close to nine years). Still, despite the emergence of the new private sector, the average tenure is longer in Bulgaria than in countries with most flexible labor markets, such as the U.S. or the U.K. The still sizable public sector in Bulgaria limits labor market dynamics.

While the relative size of the "new sector" – consisting of employees with short job tenure – is large in Bulgaria compared with European countries with stagnant labor markets, it is less impressive when compared with countries with dynamic labor markets. Workers whose job tenure is less than five years account for 49 percent of all workers in Bulgaria, more than France (41 percent) but less than in the Czech Republic, or Denmark and the U.S (around 55 percent). Thus the dynamic segment of the labor market is relatively large in Bulgaria, but it is still less than one-half of the labor market at large.

Table 5 Distribution of employment [a)] by job tenure: Bulgaria against selected countries (percentages)

	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 10 years	10 and under 20 years	20 years or over	Average tenure (years)	Median tenure (years)
Bulgaria (2001)	14.0	9.5	25.2	20.8	19.8	10.8	8.1	5.5
Private sector	20.6	13.0	32.0	18.5	10.6	5.9	5.6	3.5
Public sector	7.3	5.7	17.6	23.2	30.0	16.2	10.8	8.5
Czech R.	19.2		36.6	12.0	14.8	17.4	9.0	2.0
Denmark	25.1	11.4	16.2	18.2	17.7	11.4	7.9	4.4
France	15.0	8.0	17.7	17.4	23.3	18.7	10.7	7.7
Germany	16.1	9.4	22.0	17.2	18.4	17.0	9.7	10.7
Lithuania (2001)	15.4	8.9	21.6	25.4	16.8	11.9	8.3	5.0
Poland (1999)	14.5	11.7	19.0	17.7	20.3	16.7	9.6	6.2
Spain	35.5	4.9	11.1	14.4	17.7	16.5	8.9	4.6
United Kingdom	19.6	10.7	19.5	23.5	17.3	9.4	7.8	5.0
United States	26.0	8.5	20.0	19.8	16.8	9.0	7.4	4.2

a) Wage and salary workers

Note: data for the OECD countries refer to 1995.

Source:
Bulgaria: LFS June 2001, Bank staff calculations.
Lithuania and Poland: Rutkowski (2002)
OECD countries – OECD Employment Outlook 1997

The most indicative of labor market dynamics, and specifically of the hiring dynamics, is the share of workers with tenure shorter than one year. These are new hires, and the more dynamic is the labor market, the higher is their proportion. This share is low in Bulgaria compared with countries with flexible labor markets (Denmark, the U.S.), and even somewhat lower than in other high unemployment transition economies (Lithuania and Poland). To illustrate, new hires account for 14 percent of all workers in Bulgaria. In the Czech Republic their share is five percentage points higher, and in Lithuania is one percentage point higher. Yet, new hires account for more than one-third of all workers in Spain and one-fourth of workers in Denmark and the U.S.

Expectedly, the share of short-tenured workers is much higher in the private sector (21 percent) than in the public sector (7 percent), providing yet another indication that the former is much more dynamic and hires relatively more workers, than the latter.

Still even in the private sector the share of new hires is less than in countries with dynamic labor markets.

The comparison with Spain is particularly instructive. Why is the share of new hires so high in Spain? Unemployment has been traditionally high in Spain, in large part due to substantial dismissal costs, which have discouraged employers from hiring. Thus, in order to foster hiring the Spanish government relaxed restrictions on fixed-term contracts, which rendered them very popular among employers and led to sharply increased hiring and employment growth. Although fixed-term contracts are not the first-best solution and create problems of their own, they can provide a strong initial stimulus for job creation. The use of fixed-term contracts is restricted in Bulgaria and combined with relatively high procedural costs of dismissals this contributes to limited hiring (these issues will be discussed in more detail later in this paper).

To conclude, jobs in Bulgaria have become less stable. Much fewer workers than before hold their current job for a prolonged period of time. This indicates more labor market dynamics but also less job security. The increased risk of job loss has so far not been coupled with the improved chances of finding a new job. Job security has been lost, but new employment opportunities are still limited. Hiring conditions have been and still are relatively weak, insufficient to absorb substantial firing. The next section tries to answer why this is the case.

II. SOURCES OF HIGH UNEMPLOYMENT

The previous section documented weak labor market outcomes in Bulgaria. This section will try to identify the sources of these weak outcomes. First, it looks at key macroeconomic developments and changes in the investment climate that might have impacted labor market performance. Second, it analyzes job creation and job destruction associated with enterprise restructuring. Third, the section examines the extent of the skill mismatch and its contribution to unemployment. Finally, it discusses the role of labor market regulations as a possible source of rigidities and distortions.

It was found that in general the macroeconomic conditions and the investment climate have improved substantially in Bulgaria since 1997, and thus if anything have

facilitated job creation rather than contributed to unemployment. Despite this overall positive trend, the business environment is still moderately friendly and there is much scope for improvement. However, stable macroeconomic conditions and the associated improvement in the investment climate, as well as accelerated privatization have given rise to far-reaching structural changes which have resulted in larger flows into unemployment. The fall in employment has largely reflected substantial productivity gains achieved through large scale shifts away from old less productive industries toward new more productive jobs. At the same time, it will be later documented that outflows from unemployment have been limited, owing to skill and spatial mismatches, as well as some labor market rigidities stemming from the employment protection legislation. These factors combined – restructuring and productivity improvements along with labor market mismatches and rigidities – have caused the recently observed marked increase in unemployment. Accordingly, unemployment in Bulgaria seems mainly structural, and to a lesser extent demand deficient.

2.1 Macroeconomic Developments and Investment Climate

This sub-section examines macroeconomic developments since the 1996-1997 macroeconomic crisis with a view of determining their impact on job creation. The key developments can be summarized as follows.[5]

Macroeconomic developments have been conducive to job creation

After a deep financial crisis combined with a hyperinflation shock in 1996 – 1997, the Bulgarian economy has gone through significant market-oriented structural and institutional reforms. Since 1997, the economy has been characterized by positive growth of output combined with price and exchange-rate stability. The currency board arrangement (CBA) of 1997 restricted the governmental discretion in monetary policy and eventually brought financial stability and fiscal prudence.

During the 1996-1997 crisis output contracted by more than 16 percent in real terms. As the level of employment remained almost unchanged, the decline in output was

[5] Analysis in this and the following sub-section draws on Stoev (2002).

reflected in the productivity dynamics, dropped by some 15 percent. Real wages were even more sensitive to the crisis as they lost about 1/3 of their value. Accordingly, the brunt of adjustment to the fall in output was borne by wages rather than employment (Table 6).

Table 6 Dynamics of basic macroeconomic indicators
1995=100

	1996	1997	1998	1999	2000	2001[a)]	Average annual rate of growth, %
GDP	89.9	83.5	86.5	88.5	93.7	97.9	-0.4
Employment	100.1	96.2	96.1	94.1	89.7	95.1	-0.8
Productivity	89.8	86.8	90.0	94.1	104.5	102.9	0.5
Wages	81.2	67.7	81.7	87.3	88.3	90.9	-1.6

a) Tentative estimate.
Source: National Statistical Institute and the World Bank (GDP data).

The average productivity recovered its pre-crisis levels in 2001. Productivity grew by almost 19 percent between 1998 and 2000, although recently it seems that the pace of growth has decreased. Meanwhile, the ratio of productivity in private sector to productivity in public sector narrowed from 1.5 in 1995 to 1.0 in 2000. This narrowing of inter-sectoral differences in productivity is a positive phenomenon, as it indicates successful restructuring of the public firms, and thereby the progress of the transition (World Bank 2002). Real wages followed the rising productivity and their recovery has proceeded at a similarly high pace, although their level in 2001 was still some 10 percent below their pre-crisis level.

The CBA of 1997 substituted a system of strict rules for monetary policy conduct for an entirely discretionary central banking. The immediate impacts of the new monetary system were the price and exchange rate stabilization and restored confidence in the commercial banks. The CBA eventually brought a more stable and predictable business environment that was conductive for the entry of new and the expansion of existing firms.

The fiscal prudence after 1997 has also been beneficial for businesses as it made it possible to lower interest rates. The high budget deficit prevailing in Bulgaria until the crisis period went hand in hand with high levels of nominal interest rates which discouraged economic activity. The budget deficit has been kept close to zero for the past 4 years (i.e. since 1997), permitting the lowering of interest rates and thus, along with relatively low inflation, crating incentives for private investment.

Since the financial stabilization of 1997, both the volume of investments and their share in GDP have been increasing. In addition, a marked acceleration of the inflow of FDI has occurred following the stabilization policies. For example, green-field investments more than doubled in 1998 compared with the previous year. This substantial increase in investments, including FDI inflows, is indicative of an overall significant improvement in investment climate in the aftermath of the implementation of the macroeconomic stabilization program.

In contrast to the crisis period, it was employment which has taken the brunt of adjustment during the course of economic recovery, while wages have been recovering from the earlier sharp decline. Since 1997 aggregate employment fell by about 7 percent, largely because job destruction in the ex-state-owned companies was faster than job creation in business starts-up and existing *de novo* private companies.

At the same time, the government has maintained some level of protection of large public enterprises through direct and indirect subsidies, without imposing necessary discipline (i.e. a hard budget constraint) thus preventing the exit of inefficient firms and hindering the release of assets and labor to become available for more efficient use by restructured and new enterprises.

Why has employment declined in Bulgaria? One way to answer this question is to look at the dynamics of productivity as well as aggregate demand and its components: domestic consumption, exports, and imports. Given the rate of growth of output, the faster the growth of productivity, the slower the growth of employment. Growth of domestic consumption and exports is conducive to employment growth, while the growth of imports means that foreign labor is substituted for domestic labor. Thus, given the

output level, growth of imports leads to the fall in domestic employment. These relationships are captured by the following decomposition of the rate of employment growth:

$$r_E = r_D\left(\frac{D}{Q}\right) + r_X\left(\frac{X}{Q}\right) - r_M\left(\frac{M}{Q}\right) - r_P$$

where r denotes the growth rate of employment (E), domestic demand (D), exports (X), imports (M), and labor productivity (P), while Q represents total output.

Applying the above formula to the 1997-2000 data we see a strong job-creating effect of the growth in domestic demand, and to a much lesser extent, of the growth of exports. However, the job-creating impact of exports is markedly smaller than the job-displacing impact of imports. But the strongest negative effect on employment has had the substantial growth in labor productivity, which has offset the growth of aggregate demand (Table 7). The results of the decomposition provide further support to the argument that an important cause of growing unemployment has been intensive enterprise restructuring associated with the shedding of redundant labor, which has led to strong gains in labor productivity.

Table 7 Decomposition of employment change
(% changes)

	1997/98	1998/99	1999/2000	Average 1997/2000	Total 1997/2000
Employment	- 0.15	- 2.10	- 4.91	-2.39	-6.8
Aggregate demand	3.38	2.34	5.48	3.73	12.1
Domestic demand	11.69	7.31	3.71	7.57	24.0
Exports	- 11.23	- 2.77	16.82	0.94	4.3
Imports (-)	- 2.92	2.19	15.05	4.77	16.2
Productivity (-)	3.53	4.35	9.90	5.93	20.3
Total contribution	- 0.15	- 2.00	- 4.42	-2.19	-8.2

Source: Stoev (2002) and author's calculations.

Since 1997 privatization has gained momentum and three-fourths of the privatizable assets have been transferred from the public to the private sector over the past 5 years. Consequently, private sector employment has increased dramatically from 42 percent in 1996 to 71 percent in 2001.

Privatization has contributed to a faster structural change. There is evidence that productivity improvements in privatized enterprises since 1997 have outpaced those in new private enterprises. This is associated with the fact that productivity growth has been faster in the large companies than in SMEs. However, restructuring and fast productivity growth have led to downsizing and employment loses concentrated in large privatized firms. These have been only partially offset by the employment opportunities created by private SMEs.

As in other transition countries, privatization contracts in Bulgaria as a rule have included a commitment of the new owner to maintain employment levels for a certain agreed period (usually a few years). Given that the privatization process was heavily concentrated in 1997, some portion of the substantial decline in employment that occurred in 2000 can be attributed to the expiration of the labor preservation clauses in the privatization contracts.

Although the investment climate has improved significantly since the 1997 crisis, the business environment remains relatively underdeveloped. This includes inconsistent law implementation, frequent legal changes, considerable discretionary powers of local authorities and bureaucratic harassment (e.g. frequent inspections and audits), complicated and lengthy firm registration procedures, a stringent licensing and permit regime, high taxation, including high payroll taxes. A survey by FIAS (2000) on the administrative barriers to business in Bulgaria found that two major reasons for the generally unfriendly business environment are the lack of institutional capacity, and suspicious attitude, especially of municipal authorities, towards the private sector. Corruption is also a problem, causing distortions and imposing an additional burden on firms.[6] Unfriendly business environment inhibits job creation and thus developing an enabling business environment should become a focal point of the government's strategy to foster job creation and reduce unemployment.

[6] The level of administrative corruption (measured as the share of firm revenue paid in unofficial payments to public officials in order to "get things done") is higher in Bulgaria than in leading reformers such as Estonia, Hungary or Poland. It is estimated that in Bulgaria bribes on average account for over 2 percent of firms annual revenues (World Bank 2000)).

The informal sector remains large in Bulgaria. According to existing estimates, the informal economy accounts for about one fourth of GDP (Nenovsky and Hristov, 2000). The reasons behind the large informal sector include high taxation, over-regulation and bureaucratic harassment in the formal sector. For many informal firms the potential benefits of formalization (such as access to credit, social insurance) exceed the costs. Although the informal sector provides employment opportunities for a non-negligible fraction of the workforce, these are usually low productivity, precarious jobs with no employment protection.

In summary, macroeconomic conditions and investment climate have improved significantly in Bulgaria following the 1996-1997 macroeconomic crisis, and the country has undergone far-reaching industrial restructuring which has led to a better allocation of resources, including labor. This has created preconditions for economic and employment growth. However, the business environment remains unsatisfactory, with a negative effect on job creation.

Key macroeconomic developments and their impact on job creation are summarized in Table 8.

Table 8 Key developments and their impact on job creation (1997 – 2001)

Policy area	*Change*	*Impact on job creation and unemployment*
Monetary policy (Currency board arrangement)	Improvement	Positive
Fiscal policy	Improvement	Overall: Positive
Reduction of subsidies and the imposition of hard budget constraint on public firms	Improvement	Short term: negative Long term: positive
Budget deficit within 2% of GDP	Improvement	Positive in the long term
Financial Intermediation	Improvement	Positive
Privatization of state-owned banks	Improvement	Positive
Increased supply of bank credits	Improvement	Positive
Privatization and enterprise restructuring	Acceleration	Overall: Positive
Reallocation of labor	Acceleration	Short term: negative Long term: positive
Productivity	Improvement	Short term: negative Long term: positive
Business Environment	Stable	Overall: Mixed
Scope of arbitrary decision making and attitude towards private businesses	Stable	Negative
Entry and licensing procedures	Stable/Deterioration	Negative
Business regulation, including labor	Modest improvement	Positive
Taxation	Stable	Negative
Reduction of price controls	Improvement	Positive

Source: based on Stoev (2002)

Bulgaria is in the midst of profound structural change

After this broad-brush sketch of key macroeconomic developments let us focus on the issue of industrial restructuring which is central to the dynamics of employment and unemployment.

Restructuring in Bulgaria has had many facets: the changing industrial structure of output and employment, changes in the ownership structure, the growing share of foreign capital, and the development of the SME sector. All these changes entail profound job and labor flows. They have created opportunities for some categories of workers, mainly the younger and better skilled and, worsened the employment prospects of other categories, mainly the older and less skilled. Restructuring has created winners and losers, and as such has had an impact on the level and composition of poverty.

The most visible manifestation of the economic transition that is underway in Bulgaria has been the change in the structure of output, namely a shift away from manufacturing, that was overdeveloped during the communist period, towards previously underdeveloped services (Table 9). Thus, as in other transition economies, job opportunities in Bulgaria emerge mainly in the services sector, while many jobs in the manufacturing sector are at risk. This change in the structure of output entails a change in the structure of labor demand: the fall in demand for blue collar workers and physical labor and the rise in demand for white collar workers with skills required in the service sector. The transition from manufacturing to services is not an easy one, as the newly created jobs differ substantially from the old ones in terms of skills content. Thus, for many workers who lost their jobs in the old sector finding work in the new sector is a difficult process, often leading to unemployment or withdrawal from the labor force (as documented in the previous section).

Table 9 Structure of Gross Value Added
(percentage shares)

	1995	1998	2001*
Services	53.9	50.2	56.7
Industry	32.7	28.7	28.3
Agriculture	13.4	21.1	15.0
Total	100.0	100.0	100.0

Note: Gross Value Added represents GDP minus adjustments, which are the financial intermediation services indirectly measured, non-deductible value-added tax, excises and import duties;
* First 9 months.
Source: National Statistical Institute; reported in Stoev (2002)

The change in the structure of output is linked to privatization and even more so to the development of the new private sector. Table 10 shows that the privatization process started late in Bulgaria, only in 1997, but since then has proceeded at a relatively high pace, so that currently most assets are privately owned. As a result of accelerated privatization as well as the development of the new private sector, the private sector's share in total employment is currently over 70 percent, up from about 40 percent in 1996.

Table 10 Development of the private sector, 1995-2001
(percentages)

	1995	1996	1997	1998	1999	2000	2001	Total
Private sector's share in employment	41	42	55	61	65	70	71	na
Share of state assets privatized	1.1	4.1	18.4	4.5	17.0	4.4	1.1	52.5

na = not applicable.
Note: The methodology employed by the Privatization Agency in reporting an asset privatized requires that either the asset is directly sold or the company that owns it is fully privatized (more than 2/3 of the company's shares are private).
Source: National Statistical Institute, Privatization Agency; reported in Stoev (2002).

Another aspect of privatization has been the inflow of foreign investment, which sharply accelerated in 1997, when the stabilization package was put in place. The dynamics of FDI flows is shown in Table 12. The impact of FDI on the economy may be profound as it brings with itself new technologies, management practices, etc. FDI creates new jobs, but again, these jobs are different from those lost in the old sector: require new and usually higher skills.

Table 11 FDI Flows in Bulgaria
(USD million)

Year	*Volume*			
	Privatization	*Capital Market*	*Green-field*	*Total*
1995	26	-	137	163
1996	76	-	180	256
1997	421	30	185	636
1998	156	64	400	620
1999	306	53	447	806
2000	480	20	500	1 000
2001*	n.a.	n.a.	n.a.	522
Total	n.a.	n.a.	n.a.	**523**

Note: * Includes the period January – October 2001.
Source: Bulgarian Foreign Investment Agency and Bulgarian National Bank; reported in Stoev (2002).

Business environment should be improved

The development of a market economy in Bulgaria, as in other transition countries, is associated with the creation of new, usually small, firms and the growth of the SME sector.[7] These new firms drive the transition and provide foundation for sustainable economic growth. At the same time, the large firm sector – overblown under central planning – has been gradually declining. Table 12 illustrates this process. The number of enterprises has grown visibly in Bulgaria since mid 1990s, which is a positive sign indicating an improvement in investment climate.

However, new firms (proxied by small firms) still account for a relatively low share of total employment and value added (Table 13). The share of small enterprises in employment was 38 percent and in value added 24 percent in 1999, which is much less than in leading reformers, such as the Czech Republic, Hungary in Poland (well over 50 percent).[8] After all, the share of small firms in employment in Bulgaria is below the threshold of 40 percent, which is considered a prerequisite for sustainable economic and

[7] Firms are categorized as *small* if they employ up to 50 employees, and as *medium* if they employ 51-100 employees.
[8] Most recent (2000) NSI data show that the share of small firms in employment is 41 percent, which is still low.

employment growth (World Bank, 2002).

The low share of employment in small enterprises in Bulgaria should be of concern. One of key findings of World Bank (2002a) report on transition is that "Simply having a small number of highly productive small enterprises is not enough. Unless it is combined with rapid growth in the share of employment, the small sector will not develop the critical mass to lead to aggregate economic growth."

The insufficient rate of new enterprise growth and the resulting low share of the new sector in employment point to barriers to entry and unfavorable business environment in Bulgaria. This may turn to be a critical constraint for job creation and employment growth. Relatively slow growth of new enterprises is a likely factor behind high unemployment in Bulgaria, as the number of jobs created in the new, small enterprise, sector falls short of the number of jobs eliminated in the old, large enterprise, sector.

Table 12 Number of Enterprises by Size, 1996-2000
(in thousands)

Enterprise size	*1996*	*1997*	*1998*	*1999*	*2000*
Micro-enterprises	164.1	175. 1	190.0	195. 3	205.9
Small enterprises	9.1	9.8	11.1	11.8	12.8
Medium enterprises	2. 1	2.0	2.2	2 .1	2 .1
Enterprises employing over 100 people	2.7	2.4	2.4	2.2	2.2
Total	178.0	189.4	205.6	211.3	223.1

Note: Micro-enterprises have up to 9 employees; Small enterprises – between 10 and 50; Medium enterprises – between 51 and 100.
Source: Agency for Small and Medium-sized Enterprises (ASME) and National Statistical Institute; reported in Stoev (2002).

Table 13 Employment and Value Added by Enterprise Size
(percentage shares)

Enterprise size	Employment		Gross Value Added	
	1996	*1999*	*1996*	*1999*
Micro	16	22	10	13
Small	12	16	11	11
Medium	8	9	6	7
Large	64	53	73	69

Micro: up to 9 employees, Small 10-50 employees, Medium 51-100 employees, Large: over 100 employees
Only employees employed on the basis of labor contract.
Value Added is the difference between output and intermediate consumption. That is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production.
Source: Agency for Small and Medium-Size Enterprises; reported in Stoev (2002).

Entry of new private firms is critical for restructuring, productivity growth and job creation. However, births of new firms are associated with simultaneous deaths of old, inefficient firms, which is a normal and healthy process of "creative destruction" or market selection, whereby it is the fittest firms that survive the test of market competition. Table 14 documents that firm turnover has been relatively high in recent years, providing yet another evidence for the profound structural change taking place in Bulgaria. Both the births and death of firms have been on a rising trend since 1997. For example, 83 thousand new firms entered the market in 2000, i.e. twenty thousands more than in 1997. This steady increase in the number of business start-ups points to improvements in investment climate. Concomitantly, the increase in the number of firm deaths indicate that exit of firms – necessary for the efficient functioning of the economy – has become more prevalent. However, high firm turnover places a heavy burden on labor. Workers displaced from firms that close often find it difficult to make the transition to new firms, as they are located in different place, industry and require different skills.

Table 14 Births and Deaths of Firms

	1997	1998	1999	2000
Births ('000)	63.7	70.6	72.0	83.1
Deaths ('000)	52.3	54.3	66.4	71.4
Firm turnover (%)	21.8	21.1	21.0	21.2

Firm turnover = births and deaths as a percentage of all active firms.
Source: Stoev (2002).

Despite the marked increase in the number of businesses in Bulgaria, there still are considerable obstacles to new entry and business growth. The legal framework is inconsistent, which creates scope for arbitrary decisions making and abuse of power. Registration and licensing procedures are more difficult and lengthy than in other countries. For example, as many as seven different permits are needed to start a new firm in Bulgaria, compared with two in the U.K., or three in Estonia and Poland. In addition, the number of business activities that require a permit increased from 42 in 1995 to 100 in 2000 (Stoev, 2002). Business activity is over-regulated which creates scope for bureaucratic harassment and corruption. Box 1 illustrates problems faced by small entrepreneurs based on an opinion survey.

Box 1 Small entrepreneurs complain about business environment

A few quotes from the survey of small entrepreneurs illustrate the problems they face in opening and running a business:

"If I had to start again, I would not even think of opening a business."

"I can not even remember how many times I went for each permit. It is just insanely long".

"During the inspections they pick on every single thing. When they decide to pick up your money, there is no way out. They always find something to pick on."

"You must hold a law degree to be able to open a cafeteria."

"Instead of thinking how to be more efficient we spend 60 percent of our time thinking how to cope with tax authorities and inspectors."

"There should be rules of the game, but clear ones and equally applicable to all".

Source: Gancheva et al. (2000).

High taxes hamper formal sector job creation

In addition, the level of business taxation is high. High labor taxes (PIT and payroll taxes) are of particular concern as they negatively affect labor demand and job creation. The tax wedge between labor costs to employer and take home pay amounts to 41 percent in Bulgaria, which is high (Figure 1). It means that out of 100 Leva paid by employer as labor compensation, employees receive only 59 Leva, while the rest is taken in the form of taxes and contributions. Table 15 shows the structure of payroll taxes. Obviously, these taxes and contributions in most part are used to finance the provision of important public and social goods, such as education, health care, social security, etc. Nonetheless, the effect of a large tax wedge is lower wages and lower employment, which represent a so called "deadweight loss" of taxation. Thus, a reform of public expenditures to improve the efficiency of the system, is an important but often overlooked component of a strategy to foster job creation.

Table 15 Payroll Taxes
(percent of gross wage)

	2001
Total payroll tax rate	**42.7**
Social Security	32.7
Health	6.0
Unemployment Fund	4.0
Paid by employer	**34.2**
Social Security	26.2
Health	4.8
Unemployment Fund	3.2
Paid by employee	**8.5**
Social Security	6.5
Health	1.2
Unemployment Fund	0.8

Notes: Social Security comprises the pay-roll tax for the public pay-as-you-go pension fund and the mandatory contributions to private pension funds
The contributions are split between employer and employee according to the following gradually changing scheme: 2001 – 80:20, 2002 – 75:25, 2003 – 70:30, 2004 – 65:35, 2005 – 60:40, 2006 – 55:45, and 2007 – 50:50.
Source: Stoev (2002).

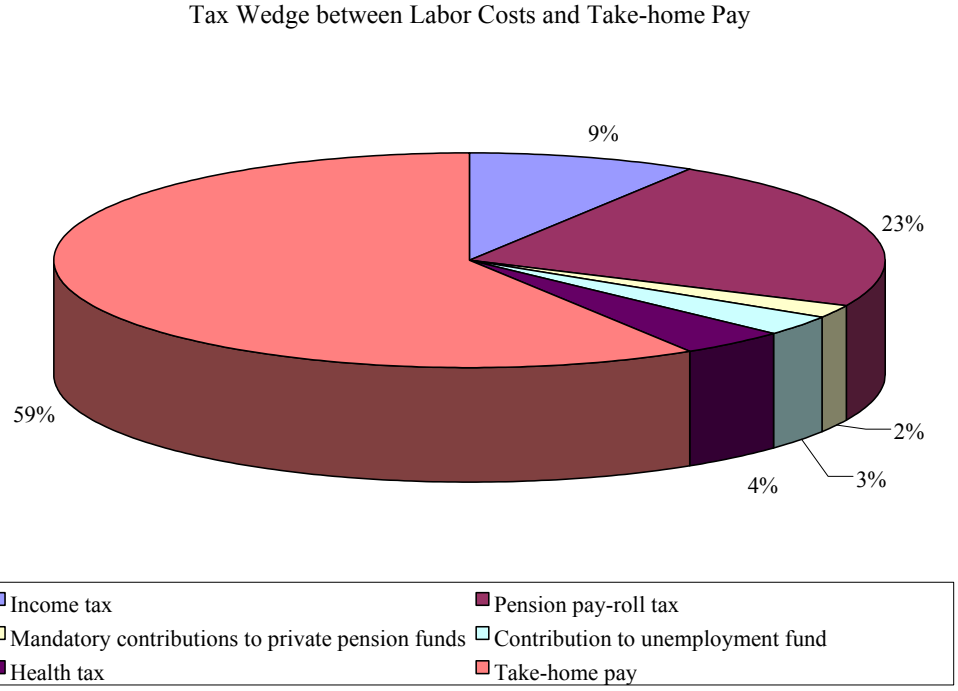


Figure 1 Tax wedge

Policy implications

Two broad policy recommendations flow from the above analysis. First, that the government should focus on removing existing barriers to entry and improving business environment. Business regulations need to be streamlined, and transparent rules need to be substituted for bureaucratic discretion. Importantly, attitude towards private business should change in a positive direction. Business entry should become easier and licensing and permit procedures should be reduced to a minimum. Second, the burden of taxes, including labor taxes, should be reduced to foster both labor supply and labor demand. This requires a substantial improvement in the efficiency of public services deliver so that a socially desired amount of services can be delivered at lower cost. These two groups of measures can help to achieve a third important objective, that is the reduction in the scope of the informal sector, as they will lower the cost of moving from the informal to the formal sector. This in turn can set in motion a virtuous circle of

broadening the tax base and thus increasing budget revenues which will make it possible to further reduce tax rates.

2.2 Enterprise Restructuring: Job Creation and Job Destruction

Persistent unemployment means that job creation falls short of job destruction. However, there is also a less direct link between job creation, job destruction and unemployment. It is argued that high job turnover – which is the sum of job creation and job destruction – may increase overall unemployment, but at the same time is likely to lower the average duration of unemployment (Garibaldi et al., 1996). This is because high job turnover implies larger inflows into unemployment, but simultaneously also larger outflows from unemployment to jobs. Conversely, low job turnover is expected to be associated with longer duration of unemployment spells, although the overall unemployment pool may be smaller. Job turnover (reallocation) is an indicator of industrial restructuring, which entails shifts away from old, low productivity jobs towards new, presumably higher productivity jobs. It is also an indicator of labor market flexibility, as labor market rigidities are reflected in limited firing and hiring, while a flexible and dynamic labor market is characterized by intense job creation going hand in hand with job destruction.

High job turnover

Earlier research on job turnover in Bulgaria found that it was relatively low in the mid 1990s, indicating limited restructuring and the existence of labor market rigidities (Faggio and Konings, 1999, Garibaldi, 2001).[9] In contrast, the 2000 data show that job reallocation in Bulgaria is quite substantial.[10] Looking at the so called excess job reallocation rate, which is the most adequate measure of restructuring, one can see that

[9] The results presented by Faggio and Konings (1999) and cited in Garibaldi (2001) understate the extent of job turnover in Bulgaria because they were obtained using a sample consisting of only large enterprises. As we will show later, job turnover is considerably higher in small firms than in large firms and thus the omission of small firms is bound to bias the results downwards. Nonetheless, the finding that the pace of job reallocation has increased in Bulgaria over recent years is robust to differences in sample characteristics. We calculated the rates of job creation and job destruction for 2000 using a sub-sample consisting of firms employing more than 100 workers (which is comparable to that used by Faggio and Konings) and still obtained values significantly higher than those for 1997 and earlier years.

the extent of enterprise restructuring in Bulgaria is similar to or higher than in mature market economies (including the dynamic U.S. market) and relatively successful transition economies, such as Poland (Table 16).[11] It is much higher than in Slovakia, where the labor market is rigid and stagnant, although markedly lower than in Lithuania, which has one of the most dynamic labor markets in CEE. Thus, by international standards Bulgaria is undergoing far-reaching industrial restructuring, which is associated with intense job reallocation.

For illustration, in 2000 the rate of excess job reallocation was 21 percent in Bulgaria. This means that close to 11 percent (21/2) of all jobs were reallocated from contracting to expanding firms. In Lithuania the rate was 27 percent, and at the other extreme, in Slovakia, it stood at only 4 percent.

---

[10] Description of the data set used to calculate job turnover rates is provided in Annex 1.

[11] One would have expected that the excess job reallocation rates will be higher in transition economies than in mature market economies, as the former need to redress the inherited problem of misallocation of resources.

Table 16 Job creation and job destruction: Bulgaria against selected countries
(as percent of total employment)

	Transition economies					OECD economies		
	Bulgaria	**Lithuania**	**Poland**	**Russia**	**Slovakia**	**France**	**Germany**	**United States**
	2000	1998-99	1998-99	1998-99	1997-98	1984-91	1983-90	1984-91
Job creation rate	10.6	13.6	9.7	12.2	2.0	12.7	9.0	13.0
Openings	3.8	3.8	4.4	..	..	6.1	2.5	8.4
Expansions	6.8	9.7	5.3	..	..	6.6	6.5	4.6
Job destruction rate	14.1	17.7	11.5	13.8	6.9	11.8	7.5	10.4
Closures	3.3	7.0	1.4	..	..	5.5	1.9	7.3
Contractions	10.8	10.7	10.1	..	..	6.3	5.6	3.1
Employment change	-3.5	-4.1	-1.8	-1.6	-4.9	0.9	1.5	2.6
Continuing establishments only	-4.1	-0.9	-4.8	..	..	0.3	0.9	1.5
Job turnover rate	24.7	31.2	21.2	26.0	8.9	22.4	16.5	23.4
Continuing establishments only	17.6	20.4	15.4	..	..	12.9	12.1	7.7
Excess job reallocation rate	21.1	27.1	19.4	24.4	4.0	21.5	15.0	20.8
Continuing establishments only	13.5	19.4	10.5	..	..	12.6	11.2	6.2

Note: data for OECD countries are yearly averages, data for transition economies refer only to one year. [12]

Sources:
Bulgaria: The Survey of Employment and Wages, 2000; Bank staff calculations (See Annex 1B for the description of the survey)
Lithuania: Rutkowski (2002)
Poland: Rutkowski (2001)
Russia: Broadman and Recanatini (2001)
Slovakia: World Bank (2001c)
OECD countries: OECD (1996)

[12] The primary concepts underlying the measurement of labor market flexibility are those of job creation and job destruction, while other measures are derived from them. Specific definitions are as follows. The *gross job creation* rate is measured as the sum of all employment gains in expanding firms in a given year, divided by total employment at the beginning of the year. *Gross job destruction* rate is defined as the sum of all employment losses in contracting firms in a given year divided by total employment. The sum of gross job creation and gross job destruction gives a measure of *gross job turnover (reallocation)*, and the difference yields the rate of *employment growth*. The *excess job reallocation* rate is defined as the job reallocation rate minus the absolute value of net employment growth. It is worth noting, that the excess job reallocation is determined by the lesser of job creation and job destruction rates.

The analysis of job creation and job destruction in Bulgaria against the backdrop of other countries, leads to a few interesting observations. First, job gains in Bulgaria have been achieved mainly through employment expansions in continuing firms, less through firm entry (business start-ups). Second, job losses have occurred largely in contracting firms, with limited impact of firm exit (closures). These two findings are consistent with and provide further support to the earlier observation that there are still undue barriers to entry and exit in Bulgaria. Third, the job creation rate is moderate in Bulgaria, while the job destruction rate is high by international standards. Thus, job destruction exceeds job creation, implying a reduction in the total number of jobs and employment. To illustrate, Bulgarian firms created close to 11 percent of new jobs in 2000, of which just below 7 percent in continuing firms. At the same time, they destroyed 14 percent of all jobs, of which nearly 11 percent in continuing enterprises. As a result, the overall number of jobs fell by over 3 percent. Fourth, the high job destruction rate (especially in continuing firms) indicates that dismissal costs are not high to the degree that would deter firing. However, they may be high enough to discourage hiring. Finally, the high job turnover rate points to intense restructuring in Bulgaria and to high labor market dynamic. This implies that there is a fair amount of labor market flexibility. However, the modest *gross* and the negative *net* job creation rates (i.e. the fall in the overall number of jobs) suggests that more favorable conditions fro firm entry and expansion are necessary to foster job creation and achieve positive employment growth.

Job creation and job destruction vary depending on firm ownership, region and industry. This variation provides important policy lessons, which will be examined below.

Small private firms: the source of labor market dynamics

As one would have expected, the public sector has been declining while the private sector has been expanding in Bulgaria. Accordingly, in the public sector job destruction exceeds job creation, while the opposite occurs in the private sector, which is the net creator of jobs (Table 17). The job creation rate in the private sector is high, at 15

percent, over two times as high as in the public sector (6 percent). The job destruction rate in the private sector is also high, accounting for 13 percent, but lower than in the public sector, which destroyed over 15 percent of jobs in 2000. Thus, it is the private sector which provides job opportunities, while the down-sizing of the public sector contributes to unemployment. Jobs in the private sector are often precarious (Kolev, 2002), but during the transition the public sector in Bulgaria offers even less job security.

Table 17 Job creation and job destruction by public/private sectors, 2000
(as percent of total employment)

Sector	Job creation rate	Job destruction rate	Job turnover rate	Employment growth rate	Excess job reallocation rate
Public	5.9	15.3	21.2	-9.4	11.8
Private	15.2	12.8	28.0	2.4	25.7

Source: Survey of Employment and Wages, 2000, National Statistical Institute; Author's calculations

In small firms the job creation rate is much higher than in large firms. For example, the job creation rate in micro firms (which employ up to ten workers) is as high as 27 percent, while in large firms it is only 2 percent (Table 18).[13] In contrast, the job destruction rate does not vary much by firm size. Micro firms eliminate about 12 percent of jobs and large firms eliminate some 10 percent of jobs per year. Consequently, the small firm sector is expanding and offering job opportunities, while the large firm sector is shrinking and shedding labor. It should be stressed, that a particularly important role in job creation is played by business start-ups. Newly established firms created some one-third of all new jobs in 2000 (Figure 2). This is more jobs than created by all medium and large firms together! The formation of new firms and the development of existing small private firms are thus key for employment growth and the reduction in unemployment.

As noted, the rate of growth of new firms has been relatively slow, and the share of small firms in employment remains low in Bulgaria, which explains why the overall rate of job creation is not sufficiently high and falls short of the rate of job destruction. The new sector, comprising of small firms, has not developed yet the critical mass to

generate enough jobs to offset job losses in the old sector. Facilitating the entry of new firms and the growth of small enterprises is hence a prerequisite for faster job creation, employment growth and eventually the reduction of unemployment.

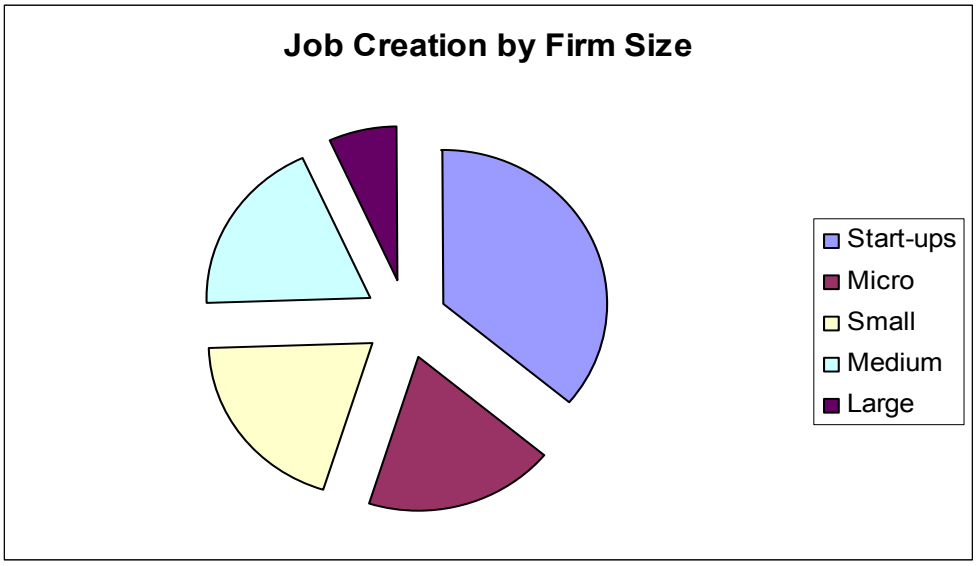
Table 18 Job turnover by firm size, 2000
(percentages)

Firm size	Job creation rate	Job destruction rate	Job turnover rate	Employment growth rate	Excess job reallocation rate
Micro	27.0	12.2	39.2	14.9	24.3
Small	10.4	15.2	25.6	-4.8	20.8
Medium	5.2	17.3	22.5	-12.1	10.4
Large	2.1	10.2	12.3	-8.1	4.2

Note:
Micro: 1-10 employees
Small: 11-50 employees
Medium: 51-250 employees
Large: 251-1000 employees
Classification is based on the employment level in the initial year.

Source: Survey of Employment and Wages, 2000, National Statistical Institute; Author's calculations

Figure 2 Job creation by firm size, 2000
(percentage share)



Source: Survey of Employment and Wages 2000, NSI, Author's calculations.

[13] To some extent the high job creation rate in small firms reflects their low employment level. Accordingly, large relative changes do not necessarily mean large absolute changes in employment.

Regional variation in job creation and job destruction

Job creation and job destruction vary visibly – although not very strongly – by region, which points to regional differentiation of labor market conditions in Bulgaria (Figure 3).[14] In regions with the best employment opportunities (Sofia City, Varna and Burgas) the job creation rate is at 12-13 percent. In contrast, in depressed regions which provide few job opportunities (Sofia district, Lovetch, Haskovo and Russe) the job creation rate is around 9 percent.

The variation in job destruction is much less than in job creation. In regions which eliminate the most jobs relative to their employment (Montana, Russe, Varna and Burgas) the job destruction rate is 15 to 18 percent. In regions which eliminate the least jobs (Sofia City, Plovdiv) the job destruction rate is 12 percent, sill very high.

In some regions large job destruction goes hand in hand with large job creation. These are high turnover regions where workers are able to switch between jobs relatively quickly. Examples of high job turnover regions include Varna, Sofia City and Burgas. In contrast, in some other regions the labor market is more stagnant, with low job turnover. In such regions once a worker loses his/her job, he/she finds it difficult to find a new one. Examples of stagnant, low job turnover regions include the Sofia district, Lovetch and Haskovo.

Job reallocation in Bulgaria takes place largely *within* regions, with very limited reallocation *between* regions. One could have expected that during the course of economic transition job reallocation will occur largely between regions (and industries) in order to redress the inherited spatial misallocation of resources. This is not the case, however. One reason is that – given that employment has declined in virtually all regions – there is little scope for regional job reallocation.[15] Only when some Bulgarian regions start to grow, this will create room for moving jobs from declining to expanding regions. A new big challenge for the unemployed – to move across regions in search for work – is yet to come.

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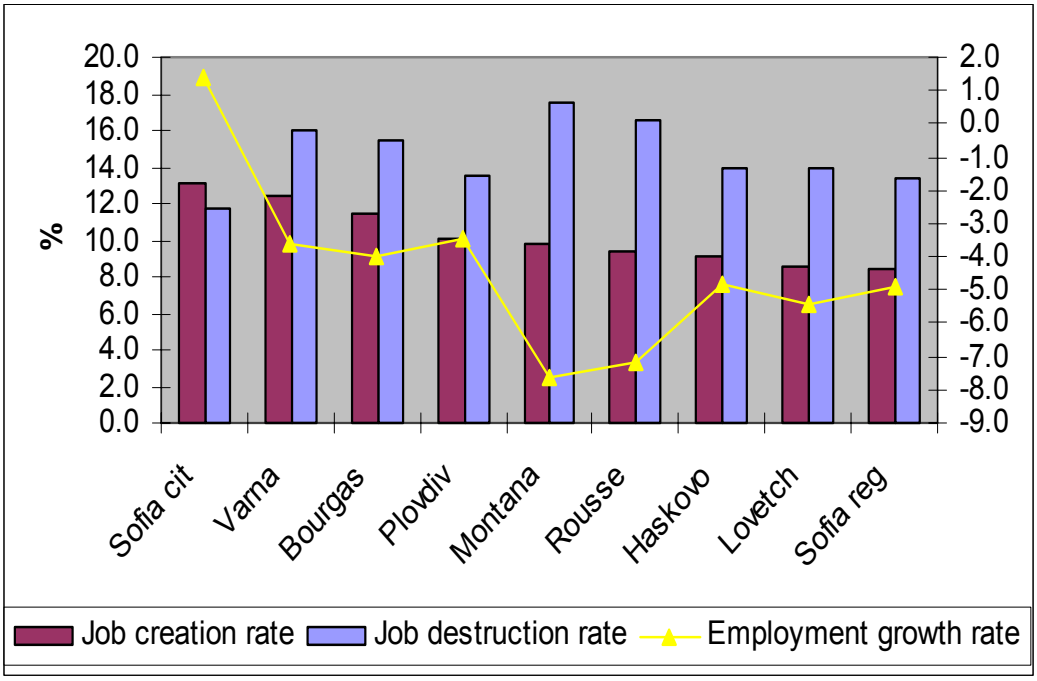
[14] Regional differentiation of labor market conditions and its sources are analyzed in Kotzeva (2002).

Figure 3 Job creation and destruction by region, 2000



Source: Survey of Employment and Wages 2000, NSI, Author's calculations.

Expanding and declining industries

Industrial restructuring entails the decline of old industries and the expansion of new industries. In Bulgaria growing industries, those which provide the best job opportunities, include the so called "other business activities", such as legal services, accounting, business counseling, marketing, personnel recruitment, etc., trade (wholesale and retail), the apparel industry, and car sale. For example, employment in "other business activities" increased by 13 percent in 2000 over a previous year (Table 20A). The growth of these industries reflects the transition to a market economy and thus a much higher share of services in the economy, Bulgaria's comparative advantage in international trade (the apparel industry), as well as increasing standard of living (car

[15] In addition, there exist various constraints to cross-regional mobility such as cultural norms, mobility costs (including the loss of social capital) and an underdeveloped housing market.

sale). These industries provide job opportunities for both highly skilled, white collar workers and less skilled service and blue collar workers.

Table 19 Job turnover by industry, 2000
Percentages

A. Top 10 industries with highest rates of job creation	Job creation rate
Electricity, gas & hot water supply[1)]	34.2
Other business activities	23.8
Wholesale trade	21.9
Car sale	17.3
Hotels & restaurants	17.1
Retail trade	16.7
Sewage & sanitation	16.4
Construction	16.3
Leather	16.1
Apparel	15.1

B. Top 10 industries with highest rates of job destruction	Job destruction rate
Forestry	38.3
Electricity, gas & hot water supply[1)]	37.7
Health care[2)]	36.7
Agriculture	21.1
Real estate	20.5
Transport equipment	18.7
Construction	17.7
Wood	17.1
Sewage & sanitation	16.6
Machinery	16.1

C. Top 10 industries with highest rates of job reallocation	Job reallocation rate
Electricity, gas & hot water supply[1)]	68.4
Sewage & sanitation	32.9
Construction	32.6
Hotels & restaurants	30.9
Real estate	28.9
Wood	28.1
Food	26.4
Retail trade	26.2
Furniture	25.2
Agriculture	23.8

D. Top 10 industries with highest rates of employment growth	Employment growth rate
Other business activities	13.0
Wholesale trade	10.8
Apparel	6.5
Car sale	6.4
Leather	5.1
Water (distribution)	4.0
Retail trade	3.6
Public administration	1.9
Publishing	1.8
Hotels & restaurants	1.6

1) High job turnover in this industry reflects administrative changes and is largely spurious.
2) High job destruction in the health sector in large part reflects changes in the type of employment relationship (employees of medical centers turning into self-employed GPs) and is largely spurious.

Source: Survey of Employment and Wages, 2000, National Statistical Institute; Author's calculations

Declining industries, where jobs are at risk and their number is shrinking, include agriculture and forestry, manufacturing of transport and machinery equipment, and the travel industry (Table 20B). The magnitude of employment reductions in some of these industries is indeed dramatic. For example, forestry decreased employment by about one-third over a year. The decline of these industries reflects economic development

(agriculture), lack of comparative advantage (some manufacturing branches), and the downsizing of the inefficient public sector (education and health).

Job opportunities are provided not only in expanding industries but also in industries characterized by high job turnover. These industries simultaneously create and close a large number of jobs, implying that the jobs they provide are often of a temporary nature. Nonetheless, for many workers they offer a chance to enter the labor market and gain work experience. Such high turnover industries include electricity and gas, sewage and sanitation, construction, hotels and restaurants, food industry, and retail trade. For example, in the construction industry, over 16 percent of jobs were reallocated from shrinking firms toward expanding firms (Table 20C). These industries create employment opportunities largely for manual, less skilled workers.

One would have expected that during the course of economic transition jobs are being reallocated largely *between* industries, as this gives rise to the change in the industrial employment structure. However it turns out that this is no longer the case in Bulgaria, i.e. it has already approached the equilibrium industry employment structure, when job reallocation takes place mainly *within* industries. Specifically, in 2000 only 17 percent of jobs were reallocated between industries, while as much as 83 percent of jobs were shifted from shrinking toward expanding firms within an industry.

The dominance of the within industry component over the between industry component of job reallocations is good news from the unemployment perspective. It is presumably easier for workers who lost their jobs to find a new job within the same industry, rather than in a different industry. Skill requirements are similar across firms within an industry, and thus the problem of skill mismatch is likely to be less severe implying limited need for re-skilling and retraining. Still, the between industry component of job reallocation is non-negligible, which means that a significant fraction of workers who lost their jobs in the declining industries need to acquire new skills in order to find new jobs in the growing industries.

How does job turnover affect unemployment?

What is the relationship between job turnover and unemployment? Is higher job

turnover associated with higher unemployment, but of shorter duration, as claimed by the theory (Garibaldi et al. 1996)? Has intense job reallocation in Bulgaria contributed to high unemployment? To answer these questions we first analyze correlations between job creation, destruction and unemployment across 28 Bulgarian districts. Second we discuss possible channels through which job turnover can affect unemployment.

The correlation analysis reveals a number of interesting relationships between job creation and destruction, and regional labor market conditions (Table 20).

Table 20 Correlations between job creation, job destruction and other indicators of labor market conditions in 28 districts, 2000

	jc	jd	egr	ejr	erate	urate	ltu	udur
jc	1.000							
jd	-0.061	1.000						
jt	0.702	0.669	1.000					
egr	0.739	-0.717	0.039	1.000				
ejr	0.969	0.108	0.799	0.603	1.000			
erate	0.471	-0.666	-0.124	0.774	0.333	1.000		
urate	-0.140	0.789	0.460	-0.626	-0.015	-0.837	1.000	
ltu	0.087	0.204	0.210	-0.074	0.144	-0.300	0.255	1.000
udur	-0.487	0.529	0.015	-0.693	-0.395	-0.851	0.732	0.415

Variable description:
jc = job creation rate; jd = job destruction rate; jt = job turnover rate; egr = employment growth rate; ejr = excess job reallocation rate; erate = employment-to-population ratio; urate = unemployment rate; ltu = long-term unemployed as a share of unemployment; udur = average duration of unemployment spells.
Note: correlations are weighted by the district's employment level.

Source: Author's calculations.

High job creation rate is associated with a high employment-to-population ratio and shorter unemployment duration. However, surprisingly, by itself, a high job creation rate does not reduce unemployment. This implies that while the working age population at large benefits from greater availability of job opportunities, the unemployed do not. This may point to the skills gap, which prevents the unemployed to compete successfully for jobs with other members of the labor force. This issue will be explored in the next section.

Not surprisingly, a high job destruction rate is associated with a low employment-to-population ratio, a high unemployment rate, and longer unemployment duration. This combined with the previous finding indicates that the unemployment rate in Bulgaria is

strongly affected by inflows into unemployment, which are a consequence of job destruction, but is not affected by the rate of job creation and associated employment opportunities. This is a negative phenomenon, which does not bode well for unemployment reduction in Bulgaria.

Expectedly, it is the difference between job creation and job destruction rates (i.e. the *net* job creation rate) that plays a critical role in determining labor market conditions. A higher net job creation rate implies higher employment and lower unemployment, as well as shorter duration of unemployment spells.

In this context it is worth emphasizing that net job creation (employment growth) tends to be higher in regions undergoing faster restructuring. There is a significant positive correlation between regional employment growth and the degree of enterprise restructuring as measured by the excess job reallocation rate (r=0.60). It is also worth stressing, that a region's employment growth depends in an equal measure on job creation (r=0.74) as on job destruction (r=-0.72). This suggests, that a strategy to promote *sustainable* regional growth should focus on job creation, rather than on preventing the destruction of unviable, low productivity jobs.

Expectedly, in high turnover regional labor markets (as measured by excess job reallocation rate) unemployment duration tends to be shorter. The correlation of these two variables is pretty strong (0.60). However, contrary to what the theory predicts, a high rate of job reallocation does not seem to contribute significantly to unemployment. In other words, more intensive enterprise restructuring does not necessarily give rise to higher unemployment.

Interestingly, the share of long term unemployment is virtually unaffected by job turnover. Specifically, a high job creation rate does not lower long-term unemployment. A large fraction of the long-term unemployed can exist in both dynamic and stagnant labor markets. This seems to suggest that the long-term unemployed are left out of the labor market and cannot benefit from job opportunities even if those are available. If so, this is a pessimistic finding.

Intensive enterprises restructuring has led to higher unemployment

Moving beyond the regional analysis, has enterprise restructuring and associated job reallocation contributed to high unemployment in Bulgaria? There are two theoretical reasons for the answer to be positive. First, in the short-run high job reallocation can contribute to unemployment due to the increase in labor productivity. Second, given the heterogeneity of jobs and workers, high job reallocation may contribute to frictional and structural unemployment.

Increase in labor productivity. Enterprise restructuring is associated with the elimination of low productivity jobs and shedding of redundant labor. Firms can produce the same output with fewer workers, which means an increase in labor productivity. However, the negative effect of the productivity increase achieved through labor shedding on unemployment is of a short-term nature. In the longer term higher productivity results in lower unit labor costs and thus encourages investment, which brings about new jobs.[16] Another way of looking at the link between productivity and unemployment is to note that there is no secular trend of increasing unemployment, which would have existed if rising productivity were causing joblessness.

Frictional and structural unemployment. Job reallocation means that the displaced workers need to search for new jobs, which takes time and requires acquiring information on new job opportunities. Moreover, jobs that have been destroyed usually differ in salient characteristics (e.g. skills required to perform them, or location) from those which have been created. Workers need to acquire new skills or/and move to different locations to find new jobs. Given that workers are not perfectly mobile, structural (skill and spatial) mismatches arise. That is, job reallocation gives rise to the mismatch between the skills demanded and supplied in a given area, or causes an imbalance between the supplies of and demands for workers across areas. Frictional and structural unemployment are thus an unavoidable consequence of restructuring and associated reallocation of labor (Lilien, 1982, Abraham and Katz, 1986).

[16] This is under the assumption that productivity gains are not fully consumed by higher wages but instead improve the rate of return on investments.

These theoretical considerations are borne out by the empirical evidence. For example, a recent study of the Polish labor market showed that an accelerated pace of job reallocation, which occurred in the late 1990s, was accompanied by a marked increase in unemployment (World Bank, 2001).

Hence, high unemployment in Bulgaria can be attributed to, at least partly, the relatively high rate of job reallocation, which has been coupled with limitations on mobility from old jobs to new jobs. However, the high rate of job turnover in Bulgaria has coincided with long average duration of unemployment, which is not consistent with theoretical predictions. In theory, high job turnover should improve the chances of the unemployed to find a new job, but in fact in Bulgaria it does not.

One possible explanation is that the long average duration of unemployment is due to a particular *structure* of job turnover in Bulgaria, whereby job destruction exceeds job creation. In other words, high job turnover in Bulgaria has taken place in the context of the overall fall in the number of available jobs and an associated employment decline. In addition (and not independently) the decreased job availability has been likely to lead to the marginalization of many the long-term unemployed, whose employability has dramatically diminished due to the erosion of their skills and morale. Hence, the long-term unemployed in Bulgaria are hardly able to benefit from high job turnover.

To conclude, the rate of job turnover has a visible impact on labor market conditions in Bulgaria. There is evidence – consistent with theoretical predictions – that higher job turnover reduces the duration of unemployment spells. However, a disturbing feature of the relationship is the asymmetric reaction of regional labor market conditions to changes in job creation and in job destruction. Unemployment is highly sensitive to the rate of job destruction. However, it is virtually insensitive to the rate of job creation. An increase in the rate of job destruction brings about an increase in the unemployment rate and in the average duration of unemployment spells. In a strong contrast, an increase in the rate of job creation by itself hardly lowers unemployment, and does not reduce the share of long-term unemployment, although tends to shorten the job search duration.

The likely reason for this asymmetric reaction is that the unemployed lack the skills necessary to successfully compete for new jobs. These new jobs often differ significantly from the old jobs as regards the skill content, occupation and necessary qualifications. This problem is aggravated by the long duration of unemployment spells, which leads to the erosion of skills and morale, and thus further undermines the effectiveness of job search and renders the long-term unemployed not attractive for employers. Labor market marginalization seems a serious problem in Bulgaria, limiting the unemployment reduction potential of economic growth and job creation.

Policy implications

Labor market marginalization is a central problem, which however is not easily amenable to policy action. There are few policy instruments to improve the employability of the hard-core long-term unemployed in a cost effective manner. Training may be an effective solution for some groups of the unemployed, but these groups and their training needs need to be precisely identified and assessed in order to render program participation effective. In addition, training in order to be effective needs to be demand driven and geared to the needs of the employers.

The only sustainable way to reduce unemployment is to spur job creation so that it exceeds job destruction. Deterring job destruction and protecting unviable, low-productivity jobs is not a way to proceed. Instead focus should be on encouraging faster job creation. Key for achieving this are a competitive product market and an enabling business environment. It has been shown that most new jobs are created by business start-ups and small firms. By definition, a competitive product market is a market that is contestable and without barriers to entry. Thus, fostering new entry entails removing any existing obstacles to competition. Small firms are particularly vulnerable to bureaucratic harassment, overly tight regulations and high taxation (Beck et all., 2002). Therefore fostering their growth calls for favorable business environment, deregulation, including labor market deregulation, and less tax burden, including the reduction in payroll taxes.

2.3 Skill Mismatch and Unemployment

As already indicated, some of the unemployed lack the skills necessary to compete successfully for jobs and find productive employment. Here further support is provided to the assertion that unemployment in Bulgaria to some extent reflects poor ability of the unemployed to compete for new jobs.

The skills gap on the part of the unemployed seems to partly account for the limited transitions from unemployment into jobs. On average, the unemployed, and especially the long-term unemployed, have lower educational attainment and lower skills than the employed (Table 21). In other words, there is an "excess supply" of poorly educated persons among the unemployed in the sense that, all else being equal, there are not enough low skilled jobs to eliminate unemployment.[17] Consequently, unemployment is disproportionately concentrated among workers with low educational attainment and poor skills. For example, the unemployment rate among workers with less than upper secondary education is over 30 percent compared with less than ten percent among workers with university education. Low or inadequate skills are thus an important factor behind high unemployment in Bulgaria.

Table 21 Employment and unemployment by educational attainment
(percentage distribution)

	Employed	Unemployed	"Excess supply"
University	19.2	6.8	-12.4
College	7.2	3.4	-3.8
Secondary technical	22.7	19.6	-3.1
Secondary vocational	16.2	16.9	0.6
Secondary general	16.5	16.5	0.0
Lower secondary	16.3	29.9	13.6
Primary or lower	1.8	6.8	5.0

Source: Employment and Unemployment, 2/2001, NSI, Sofia; Author's calculations.

In order to assess the magnitude of the skills gap, let's carry out the following thought experiment. Imagine that that the number of available jobs grows to the point where there are enough jobs for all of the unemployed. Assume that jobs for each

[17] A critical variable that here is assumed to be constant is the structure of wages. A flexible wage structure, entailing the fall in relative wages of low skilled workers, would in theory help to absorb unemployment among poorly educated workers. However, social norms embedded inter alia in the minimum wage, prevent wages from adjusting to supply and demand conditions.

education level grow at the same rate, thus maintaining the existing structure of employment by education.[18] Assume also that skill mismatch occurs only between educational levels. i.e. there are no skill mismatches within educational levels.[19] Under such a best-case scenario, where the number of vacancies equals the number of job seekers, some 20 percent of all unemployed will not find a job because of the skills gap, that is, because their skills fall short of employer requirements.[20] Expectedly, the extent of the skill gap is more pronounced among the long-term unemployed than among the short-term unemployed. Given the current rate of unemployment of about 19 percent, the estimated skills gap implies four percent unemployment rate caused by the skill gap. This is a lower bound estimate due to optimistic assumptions underlying the calculations. In reality, the problem of the skill gap and skill mismatch is likely to be still more pronounced.

The data suggest that the skill gaps has increased somewhat since mid 1990s, when it was at 17 percent.[21] Although the increase is not large, the negative direction of the change is worrisome. If the skills gap has indeed increased, then this limits the prospects for unemployment reduction, as the skills gap is hardly amenable to short-term policy interventions. While training may help to address the problem of skill mismatches and complement existing skills, it is much less efficient in bridging the skills gap (see below for recommendations).

The inadequate skills of the unemployed, especially of the long-term unemployed, are likely to be an important factor behind relatively limited outflows from unemployment to work in Bulgaria. Poor skills prevent a substantial fraction of the unemployed to effectively compete for jobs, and can lead to their marginalization on the

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[18] This is an optimistic scenario, since in reality due to the skill biased technological change high skilled jobs grow at a faster pace than low skilled jobs.

[19] This is again an optimistic assumption as after all skill mismatches do exit within educational groups.

[20] The formula to calculate the skill gap is: $sg = \sum_{i=1}^{L} (u_i - e_i)$ for $u_i > e_i$, where u_i and e_i are percentage shares of the i-th educational level in unemployment and employment, respectively, and L is the number of educational levels.

[21] Rutkowski (1999)

labor market. The high rate of job-to-job movements (10 percent),[22] compared with the low rate of exit from unemployment to work attests that the unemployed in Bulgaria often lose in the competition for new jobs with those who already have jobs. The unemployed account for only 40 percent of new hires, while the rest is accounted for persons who change jobs (40 percent), and new entrants to the labor market. In other words, there is some evidence that employers prefer to hire from the ranks of already employed rather than from the ranks of the unemployed, whom they tend to perceive as less productive.

The apparent importance of the skills mismatch and gap problem in Bulgaria points to the role of the educational and training systems in addressing the problem of low, narrow and inadequate skills. It should be emphasized that while the training system can address the problem of inadequate skills at the margin, the educational system needs to play a much more fundamental role in producing not so much trained as trainable workers. That is workers who are first of all capable of permanent learning and able to acquire new skills in response to ever changing job requirements. Thus, building an adequate human capital should be perceived as part and parcel of an effective employment policy.

2.4 Legal Constraints to Labor Market Flexibility

This sub-section looks at regulatory constraints faced by employers in Bulgaria which may negatively affect the rate of job creation. The focus is on the Labor Code, a recently revised basic legal document which governs industrial relations.

The issue of the statutory minimum wage is also addressed, as by possibly limiting wage adjustment it may negatively affect the creation of low-productivity jobs. The sub-section starts by briefly describing the existing legal framework for employment

[22] The rate of job-to-job movements means 10 percent of workers who were employed in March 2000 were in a different job one year later. This rate is high compared with other transition economies. For example in Lithuania and Poland job-to-job movements are of the order of 5-6 percent, and are thus smaller than in Bulgaria in both absolute terms and in relation to movements form unemployment to employment. The relatively high rate of job-to-job transitions means that employers prefer to fill in existing vacancies by bidding away workers from other jobs, rather than hiring the unemployed. This suggests that the unemployed in Bulgaria are marginalized, more so than in Lithuania and Poland.

and wage protection, and comparing it with that in selected transition economies. Next, it recommends some measures to improve labor market flexibility. The analysis indicates that regulatory barriers to labor market flexibility are moderate in Bulgaria, broadly in line with those in other transition economies.[23] Nonetheless, in some important dimension labor market flexibility can be enhanced .

The recent (as of March 2001) revisions to the Labor Code were meant to adjust it to the needs of a market economy and improve labor market flexibility. As such they were a step in the right direction. However, the changes did not address all of the rigidities inherited from the socialist past and thus labor market flexibility in some areas remains limited. Further labor market reforms are necessary in order to tackle to the country's acute unemployment problem.

Main indicators of the strictness of employment protection regulation in Bulgaria and in selected transition economies of CEE are presented in Annex 2. The comparison suggests that in general employment protection legislation is not unduly restrictive. Its positive side includes relatively low monetary costs of dismissals (short advanced notice and low mandatory severance pay), and an option to redistribute working hours, which gives employers flexibility in adjusting labor input to fluctuations in product demand. In some areas, however, existing legislation excessively restrains employers freedom to adjust the size and composition of their workforce to changing economic conditions, with possibly negative consequences for firm performance. These areas include:

Procedural costs of dismissal[24]. Employers complain that laying-off a worker due to poor performance, lack of skills, misconduct or redundancy is difficult in Bulgaria. Part of this is reflects employment protection provisions of the Labor Code, another part reflects a pro-labor bias exhibited by courts. The Labor Code does not mention economic

[23] Among the transition economies of Central and Eastern Europe the most rigid labor markets exist in countries which constituted former Yugoslavia. Against this benchmark, labor market in Bulgaria moderately rigid. However it is less flexible than in Estonia, which epitomizes a transition economy with a flexible labor market.

[24] Procedural costs of dismissal relate to administrative, legal and judicial procedures necessary to carry out a valid dismissal. They should be distinguished from monetary costs of dismissal (such as severance pay). However lengthy and difficult administrative procedures involve an opportunity cost and eventually translate into monetary costs borne by the employer.

(efficiency), technological or organizational reasons as valid reasons for dismissal. In addition, it lists conditions for poor performance or misconduct which are difficult to be met in practice. Courts in turn tend to declare dismissals invalid, and order reinstatement and/or payment of compensation. All this renders dismissals difficult, especially in firms with strong union presence. These procedural costs, which make it difficult for employers to fire redundant labor in the period of downturn, discourage hiring in the period of upturn. This is because employers do not want to be locked into an unprofitable relationship and try to avoid future costs associated with redundancies.

Strict limitation on the use of fixed-term employment contracts. Fixed-term contracts in Bulgaria are allowed only for work which is temporary or seasonal in nature, and can be renewed only once. This explains their limited incidence and is likely to contribute to limited hiring. As in the earlier case, if employers cannot easily adjust the size and composition of their workforce according to business needs, then they resort to less hiring. Restrictions on the use of fixed term contracts hurt especially employment chances of less productive workers (e.g. those with little labor market experience or low skills), that is exactly those workers who are most stricken by unemployment.

Restrictions on the use and high costs of overtime work. The use of overtime is in principle prohibited in Bulgaria except in emergency situations and in the case of intensive seasonal work. In addition, the Labor Code imposes a tight yearly limit of 150 overtime hours (for comparison in Hungary the limit can be twice as large). The use of overtime is also costly for employers as they have to pay an overtime premium of at least 50 percent of the base wage. These restrictions limit the ability of employers to adjust the volume of production to fluctuations in demand. However, on a positive side and partly offsetting these limitations there is a provision which allows employers to redistribute working hours within a period of one quarter, i.e. to lengthen working hours during peak demand and shorten them proportionately when demand is low. Still, greater working time flexibility would help to improve the competitiveness of Bulgarian enterprises.

Limitations on wage adjustments. According to the Labor Code employers are

obliged to pay the 100% wage rate during a production stoppage, i.e. cannot adjust wages to changing demand conditions. While the intention of this provision has been to protect worker earnings, it actually is likely to hurt workers by compelling the employer to reduce employment rather than wages during the period of depressed demand.

In addition, limitations on wage adjustment come from the statutory minimum wage. Until recently the minimum wage was low relative to the average wage, thus hardly hurting employment opportunities of low skilled and inexperienced workers. However the minimum wage was raised in October 2001, which increased its "bite". Currently the minimum wage is at around 38 percent of the average wage.[25] At this level it may limit employment opportunities of less skilled and less experienced workers in the depressed regions of the country. It should be noted that the minimum wage is not an effective anti-poverty tool, as often minimum wage workers are young persons who are secondary earners in non-poor families. At the same time too high of a minimum wage hurts the poor, whose productivity is often low, by locking them out of employment.

Policy recommendations

The removal of the above mentioned limitations on labor market flexibility can be expected to foster job creation and hiring, and to improve the competitiveness of Bulgarian firms. In particular, the following measures could enhance labor market flexibility in Bulgaria:

- Lowering procedural costs of dismissal by explicitly listing economic, technological and organizational considerations as valid reasons for a lay-off;
- Easing the restrictions on the use of fixed-term contracts by lifting the provision whereby fixed-term contracts can be renewed only once, while imposing a limit on their cumulative duration;
- Improving working time flexibility by removing the provision that prohibits

[25] The ratio of the minimum wage to the average wage may be overestimated due to common underreporting of wages in Bulgaria (which implies that the average wage – the denominator – is underestimated). If in fact the ratio is significantly lower than the one shown above, then the minimum

overtime work, substantially increasing the yearly limit of overtime hours (while keeping the daily limit for health and safety reasons);

- Limiting the increase in the statutory minimum wage (relative to the median wage) so as not to discourage hiring of low skilled workers in depressed regions of the country.

III. SUMMARY AND CONCLUSIONS

Unemployment in Bulgaria is high and of long duration. High inflows into unemployment coincide with limited outflows. Enterprises shed redundant labor and curb hiring. Workers face a high risk of losing their job, while facing low chances of finding new employment.

High inflows into unemployment are caused by intensive enterprise restructuring. Jobs are reallocated away from low-productivity uses in declining firms, toward higher-productivity uses in expanding firms, with resulting productivity gains. Higher productivity implies that, given the level of output, firms need less labor and thus lay-off redundant workers.

Outflows from unemployment are low due to three main factors. First, the insufficient growth of new firms limits job opportunities. The share of new small private firms in employment is in Bulgaria substantially lower than in leading reformers, and barely above the empirical threshold of 40 percent, which indicates critical mass of the new sector necessary for sustainable economic growth. The relatively small size of the new sector points to barriers to entry and inhibiting business environment given that macroeconomic conditions have been favorable following the introduction of the stabilization package in 1997.

Second, labor market rigidities impede hiring. In general, the labor market in Bulgaria is relatively flexible and existing constraints to flexibility are modest, as witnessed by a relatively high rate of job turnover. However, some regulations are likely

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wage at its current level is less likely to be a binding constraint and have a discernible negative impact on employment.

to inhibit job creation. These include relatively high procedural costs of dismissal and strict restrictions on contingent (e.g. fixed-term) employment contracts. High dismissal costs render employers reluctant to hire new workers during the period of economic upturn since they know that it will be costly to fire them during the period of downturn. The minimum wage may also have a detrimental effect on hiring and employment of low skilled and inexperienced workers in the economically depressed regions of the country.

Third, intensive enterprise restructuring has created skill and spatial mismatches. New jobs which are being created differ with respect to salient characteristics from the old jobs which are being eliminated. This makes the transition from old job to new jobs difficult for some categories of workers, especially those with low, narrow or non-portable skills. Consequently, many workers who lost their jobs cannot find new ones. In additions, the longer they remain jobless, the more difficult is for them to get employed as their skills and motivation erode, and employers are reluctant to hire workers with long unemployment history.

How can unemployment be lowered? There is no single measure that taken separately can bring about reduction in unemployment. However a package of measures can contribute to fostering job creation and thus to the reduction of unemployment. Such a package should focus on three broad areas:

First, priority should be given to improving business environment. Any existing barriers to entry and constraints to growth of existing firms should be removed to encourage the development of the new more productive sector of the economy. Developing a friendly business environment comprises creating transparent rules of the game, deregulation, less discretionary power for bureaucrats, lower level of business and labor taxation.

Second, the labor market should be further reformed to improve flexibility. Reforms should be based on three principles: (a) *deregulation* of labor relations through changes to the Labor Code; (b) *devolution* of the responsibility for determining the labor relations to social partners, which entails adequate and genuine representation of

employers and employees in social dialogue, and (c) *decentralization* of collective bargaining by strengthening firm level bargaining.

Third, educational and training systems should be improved to address the problem so the skills gap and skill mismatches. While the education system should be reformed with a view of providing broad labor market skills to all students, training should be targeted at selected worker groups with well identified labor market problems and tailored to the needs of employers.

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ANNEX 1A

Description of the Labor Force Survey

The Labor Force Survey (LFS) is carried out quarterly by the National Statistical Institute. The LFS data are collected from a nationally wide and representative sample of population of persons aged 15 and over, living in non-institutional households. The sample includes 24 000 households. It is a sub sample of the master sample that covers 10% of the enumeration districts defined in 1992 Population Census. The complex stratified two-staged cluster approach was applied for sample selection. The sample is stratified into urban and rural regions and in each stratum a new stratification by 28 regions is applied. The primary unit of clustering is the enumeration district and at the first stage 2000 enumeration districts are selected with the probability proportional to the size of the population living in the district. At the second stage in each of the selected districts 12 households are chosen by systematic approach. The constant number of households in each enumeration district ensures equal burden of the interviewers. The survey is run on rotating principle and the attrition rate is 50 percent, which means that ½ of the households stay in two consecutive survey waves. In one wave about 50 000 persons aged 15 and over, living in 24000 households are interviewed.

The questionnaire on informal sector activities was attached to the LFS in March 2001 and covered 1000 households or 2267 persons aged 15 and over. The sub sample of 1000 households was randomly selected from the main LFS sample, preserving the regional proportions and the proportion urban-rural locations.

To reduce problems associated with non-response, the principle of replacement of the non-respondent with a look-alike living in the same district was applied. As a results the response rate was 98% and 2269 questionnaires were available for further data processing and analysis.

In order to analyze labor force transitions one can use two options. One is to use a retrospective question included in the module of informal sector activities in the March 2001 wave of the survey, which was answered by 2253 persons. The attachment contains

question asking respondents what was their labor market status one year ago (at the end of March 2000).

The second option is to construct a panel using data from the two consecutive waves of LFS: March and June 2001. Such a panel covers all the persons who took part in the two surveys. After data cleaning the matched sample includes 23000 persons.

The main methodological difference between the two approaches consists of the way of determining the labor status.. In the March –June 2001 panel the labor force status of the respondents was determined following the standard ILO methodology. In contrast, in the March 2001 survey one's labor force status one year earlier was determined based on respondent's self categorization, with the choice limited to the following categories: employed, self-employed, student, housewife, pensioner, soldier, unemployed, and other. Such an approach was likely to result in the overestimation of the number of unemployed and underestimation of the number of persons out of the labor force in March 2000. This is because people who report that they are unemployed but are not actively looking for work or are not available for work should be, according to the ILO methodology, categorized as out of the labor force, rather than unemployed. In consequence, the magnitude of flows from unemployment to inactivity (out of the labor force) is likely to be overestimated.

ANNEX 1B

Description of the Survey of Employment and Wages

The National Statistical Institute carries out an annual survey of employment and wages. This survey was a primary source for the analysis of job creation and job destruction. The main characteristics of the survey are as follows.

Firm Coverage

The survey is a census of all registered enterprises which are subject to VAT and apply double-entry accounting standards. The survey also covers non-business sector, e.g. public administration, education and health care units. Excluded are sole-proprietor firms. In 2000 the data set of firms which responded to the survey comprised of 52721 firms.

Worker Coverage

All employees regardless of their employment status (including part-time workers, temporary workers, etc.).

Definition of employment

Employment = total employment in the firm at the beginning and at the end of the calendar year. Employment in budgetary units (e.g. schools, medical centers, etc.) is aggregated at the municipality level.

Firm entry and exit

Firm entry and exit is generally difficult to determine by means of a survey. In this study a convention was adopted whereby

entry (business start up) is defined as follows:

$E(t) = 0$ and $E(t+1) > 0$, and

exit (business closure) is defined as follows:

$E(t) > 0$ and $E(t+1) = 0$

where E(t) stands for employment at time t. and 0 means either missing data or zero employment level (those two are undistinguishable in the survey data).

It should be noted due to data limitations information on firm entry and exit is likely to be biased. In particular, the number of business closures is likely to be underestimated, as firms which closed during the reporting year do not respond to the survey. The number of business start-ups may be over-estimated as a lack of information on initial (beginning of the reporting year) employment level does not necessarily imply that the firm was not operating at that time. Accordingly, data on firm entry and exit are approximate and should be treated with necessary caution.

Data Cleaning

In a few cases matched employment records showed implausibly large increases or decreases in firm employment over a year. Such large employment changes are likely to reflect either mergers, or splits, or can be spurious, i.e., reflect errors in data entry. Given that such outliers have a large weight and bias the data on job creation and destruction, they were removed from the data set. An observation was treated as an outlier if the employment change was large in both absolute and relative terms. A large absolute change was defined as that exceeding three standard deviations. A large relative change was defined as one exceeding 33% increase/decrease in the employment level over a year.

Basic statistics referring to the original data set and the cleaned data set (used for analysis) are shown in Table A1.

Table A1 Basic characteristics of the original and cleaned data sets on employment

Firm category	No. of firms	Employment (as of December 2000)	Change in employment (January-December 2000)	
			Mean	Standard deviation
A. Original data set				
Openings	3978	99010	24.9	113.3
Continuing	47123	1632844	-2.2	42.5
Closures	1409	0	-60.3	176.0
No data	211	0	0	0
All firms	52721	1731854	-1.7	59.7
B. Cleaned data set				
Openings	3945	64757	16.4	34.8
Continuing	46967	1570708	-1.5	19.9
Closures	1382	0	-40.0	72.0
All firms	52294	1635465	-1.1	25.4

No data = missing values on both beginning and end of the year employment.

ANNEX 2

Indicators of the strictness of employment protection regulations, 2001

	Bulgaria	Estonia	Hungary	Lithuania	Poland
A. Individual dismissal					
Conditions for fair dismissal	Lack of skills & poor performance, disciplinary reasons. Business needs are not clearly sated as a condition justifying dismissal.	Non-performance or business needs	Non-performance or business needs	Business needs, non-performance, inadequate skills, disciplinary reasons.	Lack of competence, redundancy of the job
	Mutual agreement with compensation amounting to least 4 monthly salaries.			Mutual agreement with compensation ranging from 6 months salary (tenure<1years) to 36 months salary (tenure>20 years)	
Advanced notice	Unrelated to tenure	Related to tenure	Related to tenure	Unrelated to tenure	Related to tenure
Minimum	30 days (indefinite duration contract)	2 months	30 days	2 months	2 weeks
Maximum	3 months (fixed-term contracts)	4 months (if tenure more than 10 years)	90 days	4 months (workers with children, workers 5 years before retirement, disabled, etc.)	3 months
Severance pay	Not related to job tenure	Related to employer tenure		Related to employer tenure	
Minimum	1 month salary	2 months	1 month (tenure <5 years)	1 month salary	None, but 1 month in case of termination due to disability or retirement
Maximum	1 month salary	4 months salary 12 months for civil servants	6 months (tenure>25 years)	3 months salary	

	Bulgaria	Estonia	Hungary	Lithuania	Poland
Monetary compensation in case of unfair dismissal	Forgone earnings up to 6 months salary	Up to 6 months wages	Severance pay is doubled and extended to those below 3 years of tenure	Forgone earnings up to 12 months salary	Forgone earnings up to two months plus compensation up to 3 months salary
B. Collective dismissals					
Minimum number of workers constituting collective dismissal	not defined	Not regulated legislatively	10 workers	10 workers within 30 days	10% of workers in firms employing less than 1,000 workers within 30 days
Obligatory notification, consultations, or approval	none	Notification of workers' representatives	Consultations with trade unions or works councils; notification of local employment office.	information sent to local government and local labor office	Consultations with trade unions, notification of local labor office
Delay to start of notice and additional notice period	none	Not regulated legislatively	30 days	Notification of local labor office 3 months prior to planned dismissal	45 days (elaborate)
			90 days if 25% of workforce or 50+ employees are involved		
Type of negotiations required (number of workers, selection criteria, redeployment, retraining, outplacement, severance pay, etc.)		Not regulated legislatively	Consultations on planned reductions and ways to mitigate its effects	Attempt of redeployment is a precondition for dismissal	Agreement on the number of workers to be dismissed and selection criteria. If agreement cannot be reached, the ultimate decision is with management..
Severance pay		No special regulations	No special regulations for collective dismissals	No special provisions for collective dismissals	Related to total length of service

	Bulgaria	Estonia	Hungary	Lithuania	Poland
Minimum					1 month (less than 10 years)
Maximum					3 month (more than 20 years)
Fixed term contracts					
Limitations on use	Only in the case of temporary or seasons work; otherwise in exceptional cases	Objective reason (list of 6 permissible reasons)	No restrictions expect for public service (objective reason only)	Only in the case of work that is temporary in nature	No restrictions
Maximum number of successive contracts	1	No limit specified	No limit specified	2 (plan is to decrease to 1)	2
Maximum cumulated duration of successive contracts	not specified	5 years	5 years	5 years	No limit specified
Overtime					
Limitations on use (other than protection of women, minors, etc.)	Prohibited except for emergency and intensive seasonal works			Special business needs; worker's consent required	Special business needs
Yearly limit (hours)	150	200	200; up to 300 if agreed in collective bargaining	120	150
Overtime premium	50% of base salary during weekdays, 75% on weekends	at least 50% of base salary	50% of base salary	at least 50% of base salary	50% of base salary for two first hours;100% for ensuing hours
Redistribution of working hours	Possible within 4 moths	By agreement of parties	Possible within one year	Possible within 4 months period	Not provided for
Collective bargaining					
Dominant bargaining levels	Firm/Industry	National (mostly bargaining over minimum wage)	Firm	Firm	Firm

	Bulgaria	Estonia	Hungary	Lithuania	Poland
Mandatory extensions of industry level agreements to non-participating firms	In exceptional cases by MoL	No	No	No	No
Statutory minimum wage	Yes	Yes	Yes	Yes	Yes
Determined by	Government	Government; proposal submitted by tree-partite council	Government through negotiations with trade unions	Government; proposal submitted by tree-partite council	Government, based on proposal submitted by tripartite council.
Regular periodical adjustment for changes in costs of living	ad hoc adjustment	Negotiated	Regular yearly adjustment	Periodical adjustments	Yes
Percentage of the average wage	around 33 until Q4 2001,	Around 30	Around 30% until 2001	Around 40	around 40
	around 38 since Q4 2001		40% since January 2001		
Source: OECD Employment Outlook 1999, National legislation and regulations.					