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ESTIMATES OF LABOUR MARKET FLEXIBILITY IN BULGARIA

The flexibility is defined as labour market ability to respond to external influence and changes. Concerning the first aspect, the labour market reaction is studied in the case of influence of more important macro-economic factors (GDP, inflation and labour productivity). In order to estimate the labour market ability for changing, key indicators in the field are used: labour force mobility (labour market flows – internal and external), working time duration and labour contracts character. Based on the results of the study, a conclusion can be made that the Bulgarian labour market should be recognised as moderately flexible. It reacts differently to external influence, shows high cross-sectional mobility and limited application of employment flexibility.

JEL: J00, J21, J62

The labour market flexibility is quite important for the scientific and applied studies during the last years. Problems connected to the estimate of different factors (institutional, macroeconomic and policies) influence on changes in the key labour market parameters get special attention. A number of aspects of the labour market flexibility are defined and estimated. Most often it is identified with application of flexible types of employment, higher mobility of employed, changes of working places, labour market ability for reaction to external influence, degree of employment regulation and others.

Two main conceptual directions can be recognised within the wide range of definitions. The first one defines and considers the labour market flexibility as a whole (so-called external or numerical flexibility) and the second – within a given organisation (so-called internal flexibility)[1]. Each of the two directions does not exclude the other – on the contrary, they supplement each other, due to relations and interactions between them. The first direction is studied below and within this framework two concepts dominate: labour market ability for reaction to external influence (shocks) and changes; and the level of de-regulation of labour relations.[2]

[1] *Curry, J.* The flexibility Fetish: A Review Essay on Flexible Specialisation. - Capital & Class, 1993, 50 (summer), p. 99-126; *Kucera, D.* Unemployment and External and Internal Labour Market Flexibility: A Comparative View of Europe, Japan and the United States. Centre for Economic Policy Analysis, New School for Social Research, Working paper N 11, 1998.

[2] OECD. The OECD Jobs Study: Facts, Analysis, Strategies. OECD, 1994.

The first concept is based on the general understanding of flexibility of a given system i.e. its sensitiveness to external influence and the second – on the understanding that the free action of the labour market is the best regulator of labour force demand and supply. The more limited the intervention of labour market institutions is (labour legislation, collective labour agreements, minimum wages/salaries and others), the higher the labour market flexibility is.

Reaction to External Influences

A number of external factor influence the labour market, but not all of them lead to changes in its basic parameters (economic activity, employment, unemployment and wages). Several main groups of factors can be recognised within the sphere of economic theory and scientific studies: macroeconomic (economic growth, inflation, labour productivity and others); institutional (labour legislation, collective labour agreements, minimum wages/salaries and others); labour market policies (active and passive).

The labour market reaction to changes in the macroeconomic sphere is analysed and estimated. GDP dynamics, inflation and labour productivity are the most important macroeconomic indicators directly influencing the labour market parameters. They exert influence on separate labour market elements.

1. Labour Market Adjustment to the GDP Dynamics

As a synthetic indicator of the country economic development, GDP influences directly three main labour market indicators: employment level, unemployment and wages.

The GDP dynamics within the period 1989-2005 can be characterised by two phases. The first one covers years up to 1997 and is connected with a great decrease of production in general and of GDP and the second – after 1997 – with their gradual recovery. The dynamics of country economic development influences substantially the basic labour market parameters. The labour market reaction to the negative production results is most evident in shortage of jobs and the respective decrease in employment. There is considerable similarity between GDP dynamics and employment, which gives a hint for existence of a positive correlation and cause-effect relationship (Figure 1, Panel 1, A). GDP decreases by 9% for the whole research period 1989-2005 and the number of employed – by 25% i.e. there is a difference of about 16 percentage points. The observed reaction of the labour market shows, that during separate years the process of adaptation to the changing economic conditions is different.

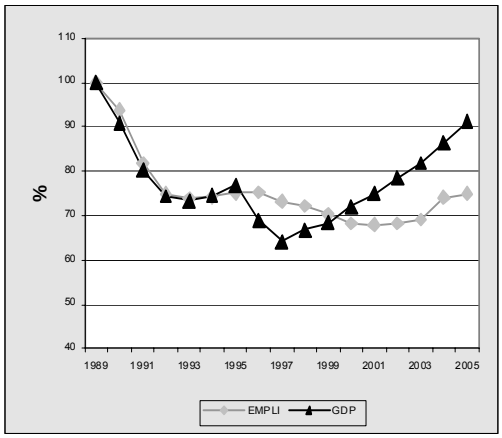
Changes in employment and GDP rates during the period 1989-1995 are almost identical. GDP decreases by 23.8% and employment – by 24.8% or the labour market adapts to the decreased demand to extent, which is proportional to the GDP decrease.

Figure 1

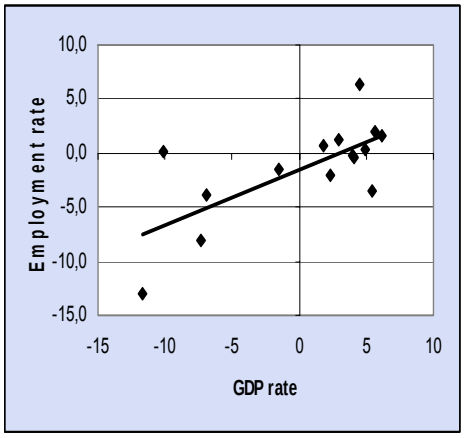
Dynamics of GDP, employment, unemployment and real wages within the period 1989 - 2005

Panel 1. GDP and employment

A. Indexes, 1989=100

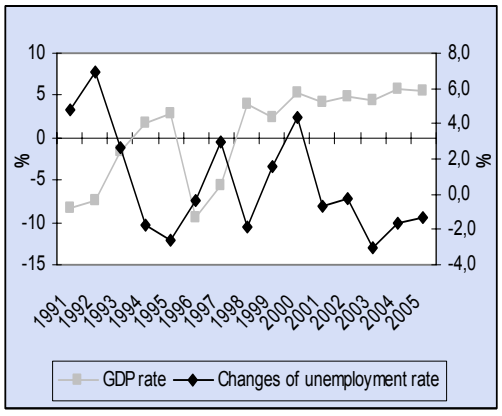


B. Proportion between GDP and employment rates

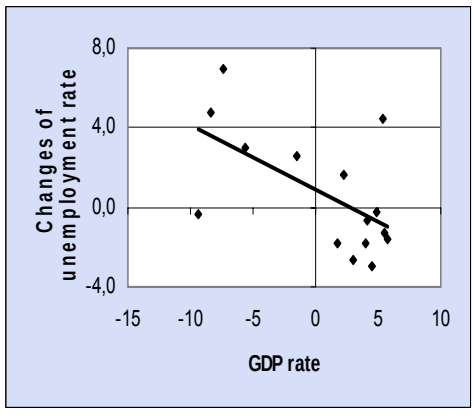


Panel 2. GDP and unemployment

A. Rates of growth and changes of unemployment rates

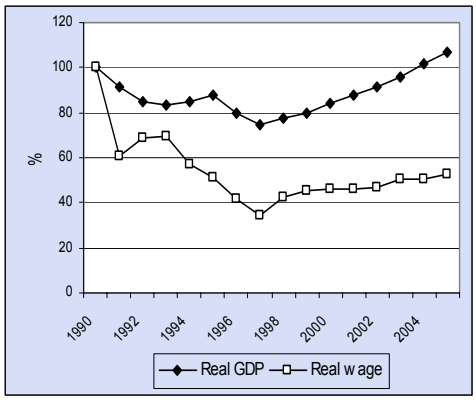


B. Proportion between GDP and unemployment rates

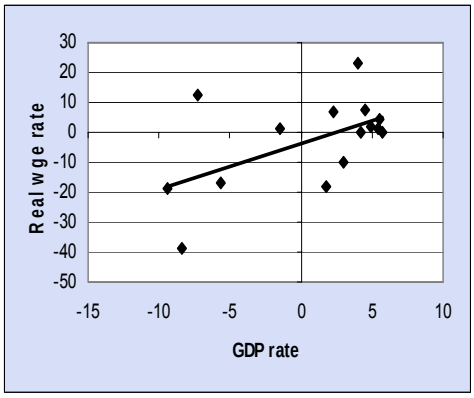


Panel 3. GDP and real wages

A. Indexes, 1990=100



B. Proportion between growth rates



Source: Statistical Yearbook, NSI, separate issues.

Lower degree of adaptation is observed after 1997. Labour market does not develop in parallel to the positive economic results. The economic growth is not accompanied by increase in employment. GDP increases by 27.5% within the period 1998-2003, whereas the number of employed decreases by 5.5%. The reason is the continuation of the structural reform through liquidation of ineffective activities and branches. In the case, the balance between closed down and newly created working places benefits the first i.e. the economic growth cannot compensate for the closed jobs. Increase in employment is achieved only within the period 2002-2005.

Irrespective of the lower adaptation of labour market during the last years, there is a positive correlation between GDP and employment (Figure 1, Panel 1, B). It means that changes in GDP lead to reaction of employment i.e. labour market react to changes in economy. Coefficient of correlation between GDP and number of employed rates is 0.53. The degree of adaptation of employment to the GDP changes can be also measured by applying elementary econometric models of correlation. In our case, a single model of the GDP and the number of employed[3] is used. Despite the relatively short time series (14 years), the results are a statistically acceptable estimate. The estimate of the degree of employment adaptation to the demand changes is not high (0.39). Percentage changes in overall demand leads to lower change in employment of about 2/3.

The results presented, based on surveying the connection between employment and GDP, show that the labour market acts flexibly. The degree of

[3] The estimated model looks as follows: $EMPLR_t = \alpha_0 + \alpha_1 GDPR_t + \alpha_2 MA(1) + \alpha_3 MA(2)$, where EMPLR is the rate of change in number of employed, GDPR – GDP rate, MA(1) и MA(2) – moving averages of first and second rank. Estimates cover the period 1990-2003.

flexibility, estimated on the base of flexibility coefficient, could be considered as relatively low.[4]

GDP dynamics influences not only the employment, but also the level of unemployment. In case of high labour market flexibility the unemployment should decrease when GDP increase. At the Bulgarian labour market this dependence is not always clear. It is quite evident at the beginning of 90s. The GDP decrease by 19.4% in 1990-1994 implicates increase in unemployment[5] from 1.5 to 15.8% in the same period. The intensity and strength of this influence are not permanent. At the beginning of 90s, the GDP negative rates influence the changes of unemployment stronger than the positive rates at the end of the period (Figure 1, Panel 2, A). The GDP increase after 1997 was accompanied by unemployment increase. Unemployment rates increases by 3.5 percentage points within the period 1999-2002 and gradually decrease after that. This result is caused also by reasons like the implementation of the second stage of structural reform.

There is negative correlation dependence between the unemployment level and GDP rate in the period 1990-2005 (Figure 1, Panel 2,B). Correlation coefficient is relatively high (-0.53) and is a reasonable basis to expect existence of cause-effect relationship between the surveyed processes. In-depth investigation of unemployment reaction to the changes in GDP dynamics based on cross-correlation analysis shows that the effect of changes of the total demand can be seen not only during the current year, but also with delay of one year. High auto-correlation coefficients accompanied by absence of lag (-0.54) and in case of one-year lag (0.48) can be accepted as confirmation. High auto-correlation coefficient in case of one-year lag suggests the direction of the cause-effect relationship. Changes in the unemployment rate are directed by the GDP.[6]

The wages dynamics is considerably behind the GDP dynamics (Figure 1, Panel 3, A). During the period 1990-2005 GDP level recovered and even became higher than the beginning of 90s, whereas purchasing power of wages decreased by about 47%. This is an evidence for limited flexibility of wages in respect to GDP changes. Despite this, there is a positive correlation between the rates of changes (Figure 1, Panel 3, B). Correlation coefficient is 0.59, but trend deviations are considerable.

2. Labour Market Reactions to Changes of Inflation

Labour market flexibility in respect to inflation changes is connected to the changes of unemployment. Their interaction is expressed by a negative sloping curve known in the economic theory as “Philips curve”. If there is a trade-off

[4] Estimate of the same dependency for the USA economy considered as model for flexibility is 0.67. See. *Stanford, J.* Testing the Flexibility Paradigm: Canadian Labor Market Performance in International Context, http://www.caw.ca/whatwedo/research/pdf/TestingFlexibilityHypothesistablesfigures.pdf

[5] Measured based on the number of registered unemployed.

[6] Additional testing of the reasonability between the surveyed variables (in the sense of Grenger) confirms the conclusion made. The probability to accept zero hypotheses or that the GDP rate is not a reason (in the sense of Grenger) for change in unemployment is too small (0.11).

between the inflation rate and the unemployment rate, the labour market can react to external shocks, caused by changes in inflation. Lack of such dependence is evidence for limited flexibility of the labour market.

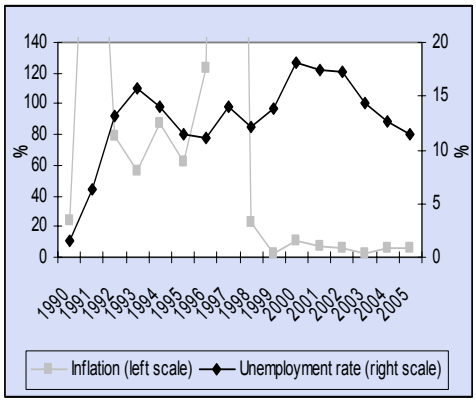
Investigations of the dependence for Bulgaria[7] show that it is statistically weakly expressed. Subject of the analysis is mainly the impact of unemployment on the inflation level and the estimation of the Non-Accelerating Inflation Rate of Unemployment (NAIRU). In order to carry out the assigned task, the opposite dependence will be investigated: influence of inflation changes on the dynamics of unemployment rate.

Two main stages are observed in the inflation dynamics in the period 1990-2005. The first one (up to 1997) is characterised by high inflation, which can be defined as hyperinflation at the beginning of 1997 and the second – after 1997 – by relatively low inflation (Figure 2, A). The borderline is defined by the introduction of the currency board in 1997. Different tendency in the development of unemployment dynamics is observed at the same time. Two peaks of increase and decrease are observed during the whole research period and in 1996 and 2006 it reaches the lowest level.

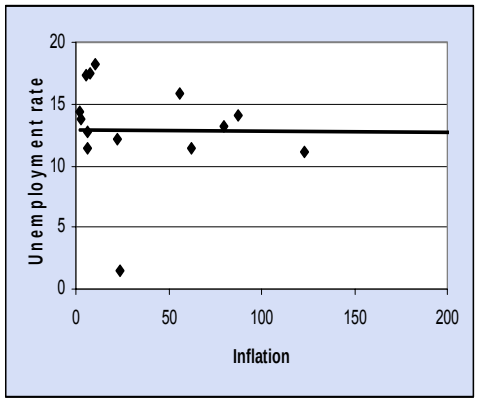
Figure 2

Dynamics of inflation and unemployment

A. *Index of inflation 1990-2005, unemployment rate*



B. Proportion between inflation rate and unemployment rate



Source: Statistical Yearbook, NSI; Employment Agency Bulletin, different issues.

[7] See *Цанов, В.* Иконометрично моделиране на трудовия пазар в България (*Tzanov, V.* Econometric modeling of labour market in Bulgaria). - Икономически изследвания, 1999, N 2; *Цанов, В., П. Луканова.* Безработицата в България: макроикономически взаимодействия и възможности за редуциране (*Tzanov, V., P. Lucanova*. Unemployment in Bulgaria: macroeconomic interactions and possibilities for reduction). Sofia: Колбис, 2003, p. 57-82; *Иванов, Л*. Зависимост между инфлацията и безработицата в България през годините на прехода (*Ivanov, L*. Dependence between inflation and unemployment during the transition period). - Икономическа мисъл, 2000, N 6, p. 47-69.

Despite the observed differences, there is a synchrony between the two variables, which corresponds to the theoretical dependence. Decrease in inflation by more than 11 times within the period 1998-2005 is accompanied with increase of unemployment by 2.4 percentage points. The question is: to what extend the reaction of unemployment is caused by the changes in inflation.

The statistical analysis of the connection between inflation and unemployment shows low correlation dependence. The comparison between the inflation rate and unemployment rate shows lack of correlation (Figure 1, B). Correlation coefficient between the two variables is quite low (-0.07). At the same time, the changes in the growth of the two variables shows periods of one-way deviation, which creates positive correlation dependence. The correlation coefficient between inflation and unemployment is low, but positive (0.27).

The low correlation between inflation and unemployment is proved by the regression analysis between the unemployment percentage (UMR – independent variable) and inflation rate (CPIR) also. In order to eliminate the price shock in 1997, a dummy variable (d1) is included into the regression, which is given value 1 for 1997 and zero for the rest years. The estimation of the regression equation parameters is realised for the period 1990-2003, by using OLS and taking into account moving averages of 2nd rank MA(1). The statistical estimates of the regression equation are presented in Table 1.

Table 1

Statistical estimate of the regression between unemployment and inflation rate:

$UMR_t = c + \alpha CPIR_t + d1 + MA(1) + \varepsilon_t$

Variable	Coefficient	Standard error	t-stat.	Probability
C	13.25074	1.118994	11.84165	0.0000
CPIR	-0.01319	0.005347	-2.467636	0.0332
d1	12.27582	5.100649	2.406717	0.0369
MA(1)	0.989840	0.032263	30.68082	0.0000
	R-squared		0.787314	
	Adjusted R-squared		0.723509	
	S.E. of regression		2.360717	
	Durbin-Watson stat		2.069143	
	Inverted MA Roots		-.99	

Results are acceptable from a statistical point of view. All the parameter estimates are statistically significant; the standard error is relatively low; the Darbin-Watson test and LM test of Breusch-Godfrey reject availability of serial auto-correlation in residuals.

The unemployment reaction towards the change in inflation rate is relatively weak – change of the percentage of inflation rate changes the unemployment by -0.01 percentage points. Consequently, the unemployment flexibility towards the influence of inflation is insignificant.

3. Reaction of Wages to Changes in Labour Productivity

One of the main aspects that create the labour market flexibility is the ability of wages to adapt to changes in labour productivity. There is similarity between the dynamics of real wages and labour productivity, measured by gross value added (GVA) per employed person, which is most evident during the years after the economic crisis in 1997 (Figure 3, A). Despite this, the real wage is behind the labour productivity dynamics. The observed positive result is due to the considerable decreasing in the number of employed. More significant differences are observed when the labour productivity is measured by the GDP per employed person. In such case, the discrepancy between real wage and labour productivity shows tendency to increase continuously. During the period 1992-2003 the difference increase 2.5 times - from 26.7 to 67.3 percentage points.

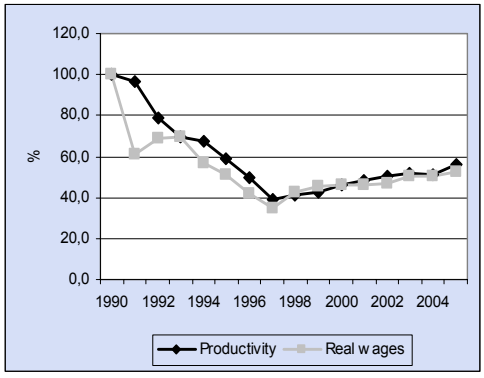
The real wage rates during a larger part of the period are lower compared to the GDP rate per employed person. Just for separate years, the real wage rates are higher than the labour productivity rates.

Despite the discrepancies in labour productivity rates and real wage, there is positive correlation dependence between them (Figure 3, B). Points, expressing the connection between rates, create positive trend. Connection strength, defined by the correlation coefficient is 0.47. However, there are considerable deviations of the trend.

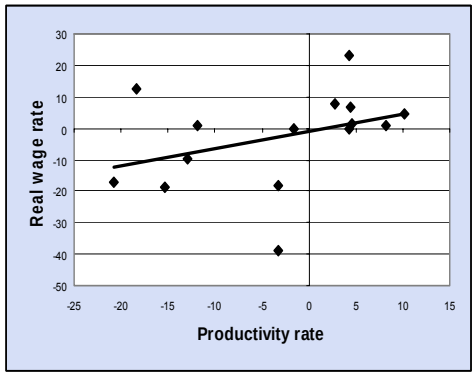
Figure 3

Labour productivity and real wage dynamics, 1990-2005

A. Indexes, 1900=100



B. Proportion between growth rates



Source. Statistical Yearbook, NSI.

Estimates show that wage flexibility to changes in labour productivity is not high. To a great extent this is due to the relatively strong regulating function of the state which sets wages in government sector.

Labour Market Ability for Changes

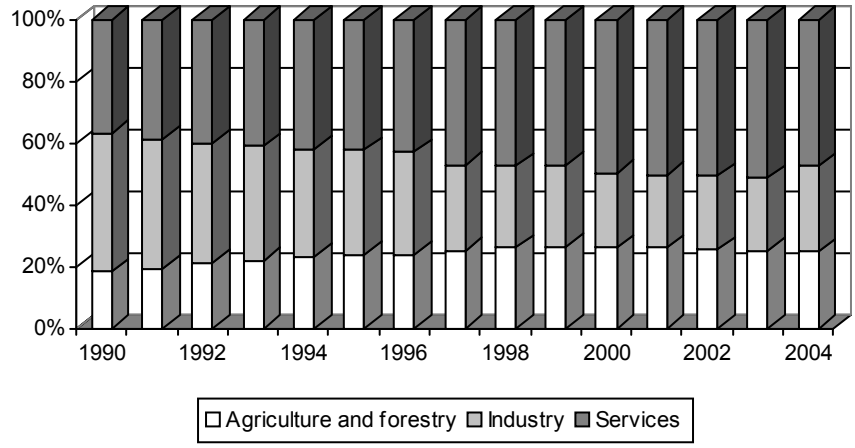
The second aspect of measurement of the labour market flexibility concerns its ability for changes. Key aspects of this type of flexibility are labour force mobility (labour market flows – internal and external), the working time duration and the working contracts character.

1. Labour Force Inter-sector Mobility

Structural changes in the Bulgarian economy during the 90s created appropriate conditions for intensive labour force mobility. The country labour market reacts adequately to the changes. Changes in employment at a sector level are considerable and are expressed by considerable decrease in employment in industry, accompanied by increase in services and to a certain level in agriculture (Figure 4). Share of employed in industry has decreased from 44.7% in 1990 to 27.6% in 2004. At the same time, not only employment, but also the production in the sector of services considerably has increased. As a result, the employment in services has become leading for the economy (share of employed increase from 37% in 1990 to almost 50% in 2004). The share of employed in agriculture and forestry has increased too: from 18% in 1990 to 25% in 2004.

Figure 4

Structural changes of employment by economic sectors, 1990-2004



Source: Statistical Yearbook, NSI, for the respective years.

Changes in the employment structure are a result of active inter-sector mobility of the labour force and increased flexibility of the labour market. Flow of labour force is directed from industry to services mainly (Table 2). Nearly 2/3 (about 70%) of the decreased share of employment in industry is directed to increase of employed in services.

Table 2

Changes in share of employed by economic sectors and periods (percentage points)

Period	Agriculture and forestry	Industry	Services
1990-2004	6.70	-21.10	14.60
1990-1997	6.90	-17.20	10.30
1998-2003	-1.00	-2.90	4.00

Source. Statistical Yearbook, NSI, for the respective years.

Consequently, the flexibility of sector labour markets is different. The ability of the economy to reallocate the labour force from one sector to another depending on changes in demand and technological conditions can be estimated based on the changes of employment in relation to the average for a given period (Table 3).

Two labour markets, having relatively high labour force mobility can be identified: industry and services. The first one gets narrow due to the decrease in demand and the second enlarges very fast and accepts a considerable part of labour force coming from industry. Mobility of labour market in agriculture is not high. Deviations from the average value for the period are twice lower than that of the services sector and nearly five times lower compared to the industry. Despite this, the agriculture accepts and releases labour force, but to a lower extent, compared to the other two sectors.

Table 3

Degree of employment variability by economic sectors

	1990-2003		1990-1997		1998-2003	
	Standard deviation	Coeff. of variation	Standard deviation	Coeff. of variation	Standard deviation	Coeff. of variation
Agriculture	41.6	5.4	44.2	5.9	23.4	3.0
Industry	228.9	25.0	212.9	20.2	44.3	6.0
Services	95.9	6.2	112.0	7.1	23.0	1.5
Total	122.1	12.0	123.0	11.1	30.3	3.5

Source. Statistical Yearbook, NSI.

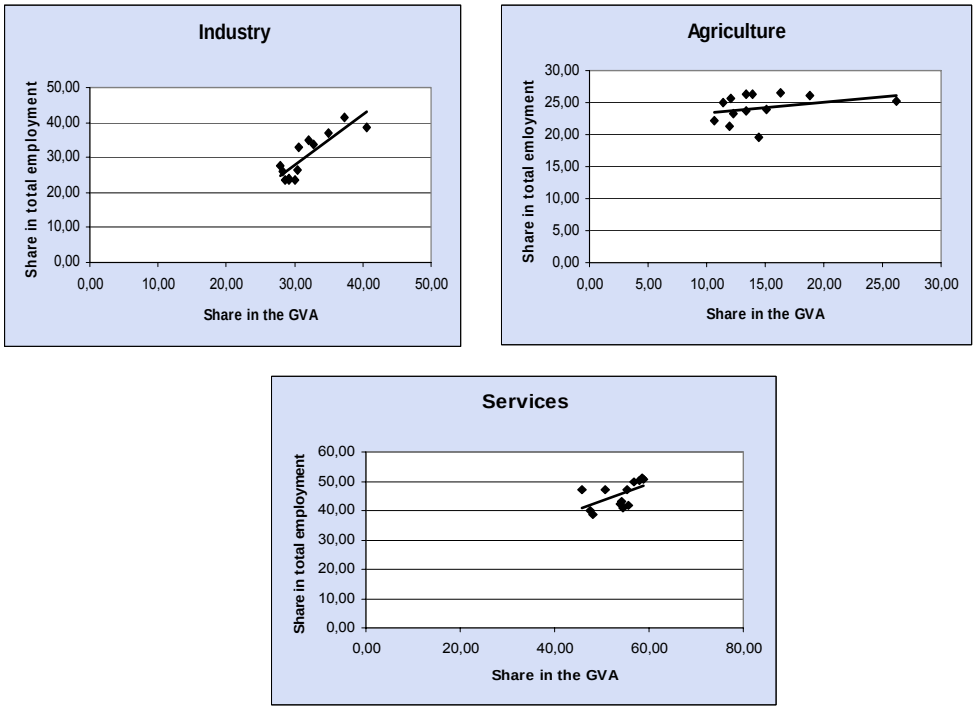
Labour force sector mobility is not equal during the whole period of 90s – it is considerably higher during the first half and decreases during the second. Obviously, at this stage of development of the Bulgarian economy, the mobility is mainly due to structural changes and to a lower extent – to technologic changes.

Comparison of changes in employment and contribution of each sector to the newly produced output proves the conclusions made (Figure 5). Mobility of employed towards the services corresponds to the enlargement of production and the increasing share of GVA. The high correlation coefficient between the respective share (0.6) and the positive trend of development show a high degree of possibilities for adaptation and flexibility of employment in respect to economic results.

Adjustment of employment to the economic results in industry is not so strongly expressed. The share of industry in GVA during the period 1996-2003 varies between 28-31%, whereas the share of employed decreases.

Figure 5

Relationship between employed and participation in the GVA by economy sectors, 1996-2003



Source. Statistical Yearbook, NSI.

The relation between employment and its participation in GVA is weakest in the agriculture and forestry sector. The increase of employment in these sectors at the beginning of 90s to a relatively high level (about 26% of the total number of employed) and remaining at almost the same level in 2004 does not correlate with the decrease of participation in GVA. Low mobility of employed in this sector and low level of adaptation to the production results are a substantial reserve for increase in the employed effectiveness in the future.

2. Flows at Labour Market and Labour Turnover

An important measure of the labour force mobility and labour market flexibility is their turnover in the employment and unemployment. The indicator measures the speed of labour market adjustment to changes in economic conditions. The turnover of employed (measured as a sum of incoming and outgoing flow of employment referred to the total number of employed) gives an idea about the level of working places renewal. The higher this turnover is, the faster the change of working places is and the labour market reacts more flexibly to the changes in demand and supply. The labour force movement in and out of the unemployment gives an idea about the ability of the labour market police to ensure employment and to shorten the duration of unemployment. A high turnover of unemployment decreases its duration and the social burden.

The estimate of turnover of employed is based on statistical information on persons employed under a labour contract. Outflow of employment includes people, whose labour contracts are terminated and the inflow – all people, who have labour contracts. The information concerns the turnover of persons working under labour contract. The rest – persons working under civil or another type of contract is not included into the turnover of employed. Nevertheless, the data partially give a notion of the labour force mobility in employment.

The dynamics of percentage of incoming and outgoing flow[8] of employment, as well as the turnover[9] of employed under labour contract in the period 1990-2003 are presented in Figure 6.

Estimates show quite intensive movement of the labour force. On average, during the period 1990-1996 about 44% of persons working under labour contract changed their status to employed.[10] The turnover of persons working under labour contract considerably increase after 1996. About 2/3 of these contracts are terminated and persons enter new employment. This share reaches 75% of persons working under labour contract in 2000.

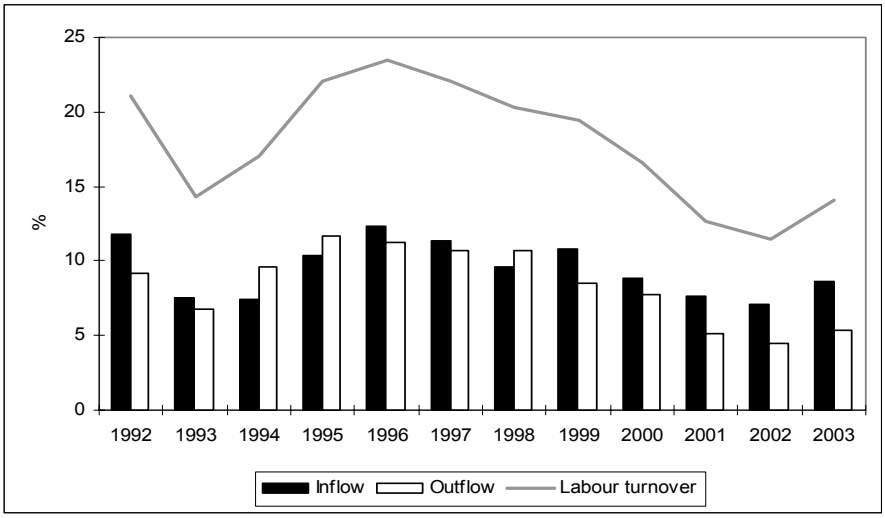
[8] It is calculated as a ratio between persons working under labour contract and dismissed persons referred to the total number of people working under labour contract.

[9] Sum of the percentage of the incoming and outgoing flow.

[10] Data concern the public sector only.

Figure 6

Percentage of the incoming and outgoing flow of employment and turnover of employed under labour contract, 1990-2003



Source. Statistical Yearbook, NSI.

Concerning the labour force movement in and out of employment, dominating is the outgoing flow. This is quite obvious during the first years of economic reform (1990-1994). Outgoing flow represents nearly 2/3 of the turnover of persons working under labour contract within the research period. The percentage of newly hired persons surpasses the percentage of dismissed only during the last three years.

The dynamics of the outgoing and incoming flow of employment directly depends on the realisation of the structural reforms. During the first stage of re-structuring (1990-1996) a tendency is observed towards gradual decrease in the percentage of persons who leave their employment and respectively, increase in the number of newly hired ones, despite the domination of the first group. During the second phase (1997-2000), the flow of people who leave their job increase and the flow of newly employed decrease, but the differences are not considerable. It means that the closure of working places is accompanied at almost the same degree with the creation of new ones.

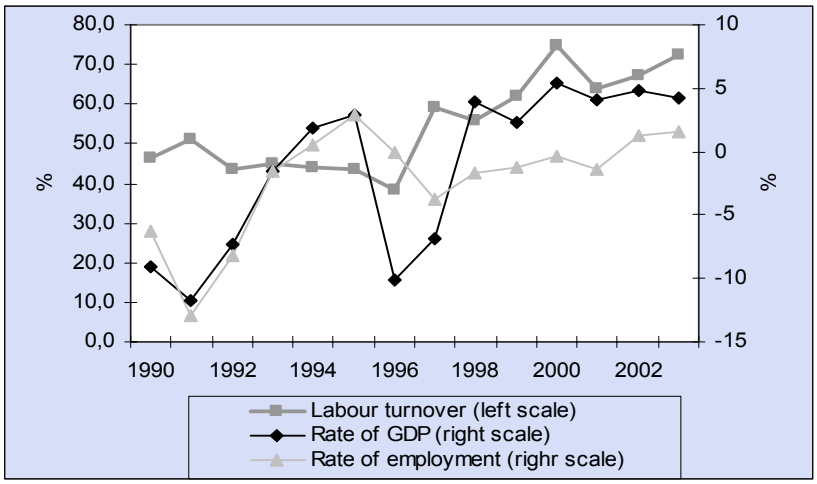
The turnover of employed depends not only on structural changes, but also on the country economic development. In principle, the economic growth accelerates the turnover of employed by increasing the number of new jobs – situation that increases the incoming flow. The turnover at the same time increases due to the accelerated replacement of working places, without

changing employment status – there are favourable conditions for voluntary leaving one working place and accepting a new job. The turnover of employed decreases in crisis conditions due to the dismissal of labour force and limitation in the number of newly engaged.

The dynamics of turnover of employed, economic growth and employment show that Bulgaria is close to such model (Figure 7).

Figure 7

Dynamics of the labour turnover, GDP and employment, 1990-2003 г.



Negative GDP and employment rates during the period 1990-1996 are accompanied by a decrease in turnover of employed. It increases after 1997 under the conditions of increase in economic growth and employment. The degree of interaction between them, measured by the correlation coefficient, is presented in Table 4.

Table 4

Interaction between the turnover of employed, GDP rate and employment rate (1990-2002)

	1990-2002	1990-1996	1997-2002
Correlation between the GDP rate and turnover of engaged	0.58	-0.20	0.46
Correlation between turnover of engaged and rate of employed	0.16	-0.71	0.62

The connection between the economic growth and employed during the whole research period is positive and relatively strong. It means that the periods of decrease and progress correlate relatively well to the decrease and increase of labour force turnover. On the other hand, it is not equally valid for the sub-periods. The connection is negative and relatively weak for the period 1990-1996. Decrease in the negative rates of economic growth and achieving positive growth in 1994 and 1995 do not influence sufficiently the decrease in labour resources turnover. Obviously, the labour force high mobility is mainly due to the decrease in employed aiming at increase in the employment effectiveness. The connection became positive and relatively strong during the period of progress. It can be accepted that positive economic growth creates conditions for opening new jobs and increases the turnover of workers. The high turnover is not strongly connected to the rate of employment. The correlation coefficient is positive, but too low (0.16) during the whole period. On the other hand, the connection is relatively strong, bur with different direction during the separate sub-periods. Decrease in the turnover correlate weakly with the improvement in the employment rate during the first sub-period (negative employment rates decrease and became positive at the end of period – Figure 7). The situation during the second sub-period is quite different. There is a strong positive connection between the dynamics of employed and the turnover of labour resources. It also corresponds to the strong dependence between the turnover of employed and the economic growth. The economic growth generates high turnover of labour resources in this case, which influences the increase in employment rates. Thus, the labour market flexibility during this period, estimated on the base of mobility in and out of the employment, can be accepted as consequence of a better adaptation to changing external conditions.

The dynamics of labour market incoming and outgoing flows and flows between employment and unemployment is another aspect of the labour market mobility. Changes in these flows show to what extent the whole labour market adapts to changing external and internal conditions.

Thus, the labour flows are defined on the base of the “Employment and unemployment” survey for the period 1996-1997[11] and in 2003.[12] Surveys results show relatively low labour force mobility between employment, unemployment and economic inactivity. A relatively small part of employed leave their job (5.5% in 1996 - 1997 and 3.5, 3.0 and 6.0% in the II, III and IV quarter of 2003 respectively). The distribution between unemployed and inactive people has changed. Transition from employment to inactivity in 2003

[11]: *Rurkowski, J*. Labour Markets and Poverty in Bulgaria. WB, August, 1999, p. 2 (Survey of the World Bank).

[12] *Beleva, I., V. Tzanov, G. Tisheva*. Flexibility and security in the Labour market: Bulgarian’s Experience. ILO Flexicurity Paper 2004/03, 2005, p. 30.

is considerably different compared to the period 1996-1997. In principle, those are people who voluntary leave their jobs and those who retire; those who leave because of cut down of staff are less.

The outflow of unemployment is considerably large. It shows high dynamics during the observed years. The share of those who leave is doubled in 2003, compared to the period 1996-1997. A major part of them leave the labour market. These are mainly discouraged workers, whose number considerably increased during the last years. At the same time, a great part of unemployed get new jobs. The share of those who get new job increases from 6.2% in 1996-1997 to 16.3% in II/ quarter of 2003. Most probably those are people, who became employed under different programmes for subsidised employment.

Positive changes are observed in the incoming labour market flow too. The share of inactive persons who became part of the labour market is 1.7% in 1996-1997, compared to 7.8% in the IV quarter of 2003.

The main conclusion that can be drawn based on the labour force movement between employment, unemployment and inactivity is that the labour market flexibility has increased.

3. Types of Employment

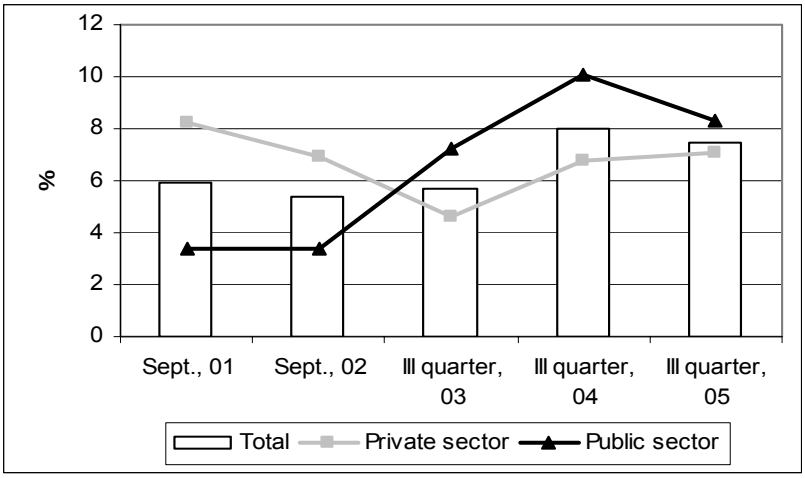
Possibilities for changes in the labour market depend to a great extent on the types of employment applied. The application of more flexible types of employment enables employers to be more elastic in respect to changing market and financial conditions. It is easier and less resource consuming for the employers to adapt their company employment policy to economic results. The more flexible types of employment do not always enhance the security of jobs and income of workers. That is why, employment types are regulated by the labour legislation and are subject of trade unions support.

Labour contracts with limited duration (temporary contracts), contracts for work that have to be done for a short time interval (assigned by intermediary labour agencies), part time employment, self-employment, working under civil contracts at more than one place and without labour contract are considered as flexible types of employment in the world theory and practice. A part of them is directly connected to the informal employment (the last three types). It is difficult to estimate the distribution of pointed flexible employment types in Bulgaria due to the lack of appropriate statistical information. That is why, those on which information is available are analysed in the study.

Labour contracts with limited duration are relatively rare (Figure 8). Most of employed in Bulgaria work under unlimited labour contracts. The share of workers under permanent working contracts is 4/5 of all employed under labour contracts. The share of persons engaged under fixed duration labour contracts varies between 4.5-5.8% within the last three years. It is not possible to discuss a tendency of development within a three-year period, but there is a considerable increase in the number of people engaged under temporary labour contracts in 2003 (from 4.6% in 2002 to 5.8% in 2003).

Figure 8

Share of workers under labour contracts with limited duration
by type of ownership



Source. Employment and unemployment, NSI.

There are considerable discrepancies between workers in the private and public sector. Obviously, the employers in the private sector use more flexible types of employment. The situation changed in 2003 in the public sector favour due to the increase of subsidised employment, which is based on temporary labour contracts (mainly within the framework of the programme "From social benefits to employment").

Situation in Bulgaria, concerning the labour contracts with fixed duration do not differ from that in Central and East European countries. For example, the share of workers under temporary labour contracts in 2000 in Czech Republic is 8.1% of all employed, in Poland – 5.8%, in Hungary – 6.9%, in Romania – 2.9%, in Lithuania - 3.8%.[13] More considerable differences are observed in comparison with EU-15. The share of workers under temporary labour contracts exceeds 10 percent at the end of 90s.

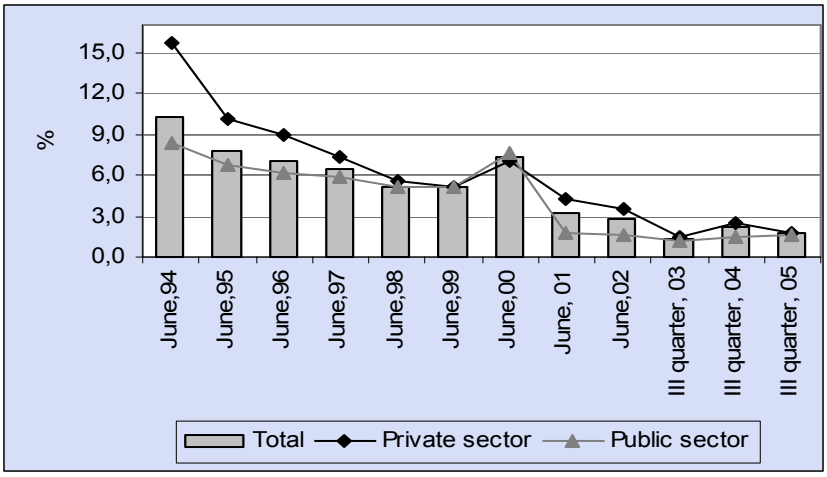
Part-time employment is not widely applied in the country (Figure 9). General tendency of the last 10 years is a considerable decrease in the number of the part-time workers. The share of part-time employed has decreased more than 3 times (from 9% in 1994 to 2.8% in June 2003). This tendency

[13] *Cazes, S., A. Nesporova*. Labour markets in transition. Balancing flexibility & Security in Central and Eastern Europe. ILO, Geneva, 2003, p. 45.

is observed both in the public and the private sector. It is more clearly expressed for the latter one, but despite this fact, the private sector shows larger flexibility.

Figure 9

Share of part-time employed (June 1994- June 2005)



Source. Employment and unemployment, NSI.

The reasons for the relatively rare application of part-time employment are different, but can be seen in people's preferences and possibilities of offering and searching employment. Employees are not interested in work, which duration is less than usual (8 hours per day). This type of employment reduces the size of wage received. Persons working part-time point as a reason to accept it the lack of full-time employment (about 30-67%), education (1-4%) and family reasons (2-7%).[14] Employers also are not very much interesting in part-time employment, because it does not lead to a substantial reduction in the labour costs. In principle, the division of a given job among several people leads to additional costs.

Application of such type of employment in Bulgaria is relatively low compared to the Central and East European countries, members of the EU. The highest share of part-time employment is registered in Romania (16.4%), followed by Lithuania (10.6%) and Poland (10.7%). It varies between 1.6-6.7% in the other countries.

The structure of employed by the type of labour contract shows that the share of workers under irregular labour conditions (more flexible types of

[14] Employment and unemployment, NSI, different publications for the respective years.

employment) is relatively low (Table 5). It represents about 9.1% of employed in 2001, decreased during the next years and reached 6.1% in 2003. The most substantial decrease has been observed for the engaged under the civil contracts (from 3.8% in 2001 to 2.1% in 2003). A relatively low decrease is observed in the number of people working without labour contract – 0.9 percentage points.

Table 5

Structure of employed according to the type of labour contract (%)

Period	Total	Labour contract	Civil contract	Other contract	Without contract
March'01	100.0	91.0	3.7	1.3	4.0
June'01	100.0	89.5	4.3	1.3	4.8
September'01	100.0	91.0	3.6	0.8	4.5
December'01	100.0	92.1	3.5	0.7	3.7
March'02	100.0	91.5	3.4	0.8	4.2
June'02	100.0	89.7	3.9	1.1	5.3
September'02	100.0	91.7	3.8	0.8	3.7
December'02	100.0	93.3	2.9	0.7	3.1
March'03	100.0	94.0	2.2	0.6	3.3
June'03	100.0	94.8	1.9	0.5	2.8
III quarter 03	100.0	93.0	2.2	0.8	4.0
III quarter 04	100.0	93.6	2.1	0.5	3.8
III quarter 05	100.0	93.8	1.5	0.5	4.2

Source. Employment and unemployment, NSI, for the respective periods.

The decrease in the number of employed under civil or other unspecified contracts, as well as without contracts, should not be interpreted as a tendency, limiting the labour market flexibility. More likely this is a trend of limitation of the informal employment, because in practice employed with such contracts work under the same conditions like workers with labour contracts. On the one hand, these types of employment are flexible and on the other hand, they provide no social protection for the workers. Employers are not obliged to pay social contributions and bear no responsibility for labour accidents. The limitation of the number of workers under civil and other contracts is due to the procedure for re-registration of labour contracts, conducted by the National Insurance Institute in 2003. As a result, a number of civil contracts were transformed in labour ones.

*

The following conclusions can be drawn about the influence of macro-economic indicators on labour market parameters in Bulgaria and its capability to change:

First, labour market flexibility can be estimated in general as moderate. It reacts to external influence, but the reaction is not strong because of different reasons. Reaction of unemployment to changes in inflation is rather weak. The positive side of the low flexibility is the possibility for application of a wider range of measures for controlling inflation and unemployment, without considerable influence on their dynamics.

Second, labour market manifests high inter-sector mobility. It is mainly due to the considerable re-structuring of economy during the 90s. Mainly the labour force moves from industry to services. This mobility can be evaluated as effective, because it is accompanied with an increase in services share in the GDP. Employment in agriculture is not so mobile and has low capacity to adapt to economic outcomes.

Third, labour market shows relatively high dynamics. Turnover of employed is high (nearly 2/3 of employed change their status) and correlate positively to the GDP dynamics. There is a relatively lower mobility and, consecutively, flexibility between incoming and outgoing flows; between employed, unemployed and inactive people. Nevertheless, in a dynamic aspect increase in the mobility of these flows is observed.

Fourth, flexible types of employment are relatively rare on the labour market. Employed under labour contract with limited duration as well as part-time workers represent only a small part of the total number of employed. In this context, a lot of them enjoy better labour protection, but limited flexibility.

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