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Quality of Employment measured by statistical methods

Supporting paper submitted by the National Statistical Institute of Bulgaria¹

I. Introduction

1. The labour market situation in Bulgaria is influenced mainly by the long and difficult period of transition from a centrally-planned to a market economy. Consequences from this process are:

- the change of the relative importance of the branches in the national economy – from manufacturing to trade and services and, therefore, change of demand from one kind of occupation to another;
- the growing share of the private sector due to the privatization of formerly state-owned enterprises;
- the high rate of unemployment;
- high inflation dynamics;
- low real incomes and low purchasing power.

2. The quality of employment characteristics in Bulgaria is generally connected with employment-related income, which is the main source of income. As a result of the growing rate of unemployment, people are looking for any kind of paid employment. This is especially true for those with a low level of education and the long-term unemployed. The active policy measures of the government towards improvement of employment conditions are expressed in the provision of educational and training courses for the risk groups of the population and the long-term unemployed, and the creation of conditions for developing entrepreneurship for unemployed people.

1 Paper written by Tanya Alexandrova.

3. The aim of this paper is:

- to present statistical data sources for indicators of employment quality in its main dimensions: contractual arrangements and forms of employment; mode of employment – full-time or part-time; employment-related income; job content - continual training and increase of occupational skills; health and safety at work;
- to describe the concepts and definitions used in each survey;
- to make an overview of employment quality in Bulgaria on the basis of existing indicators from statistical data sources.

II. Indicators of employment quality measured by Labour Force Survey

4. One of the most important sources of the labour market situation and dynamics is the Labour Force Survey, which has been carried out since September 1993 by the National Statistical Institute of Bulgaria.

The resident population of Bulgaria is covered by the Labour Force Survey. Only private households are surveyed. The survey covers all persons of 15 years of age and over, members of the selected households. The surveys are based on a stratified (by town and village) two-stage cluster sample. Clusters in the first stage are the enumeration districts according to the Census of the population as of 4.12.1992, and at the second stage - households. With probability proportional to the size of the regional population, 2000 enumeration districts are chosen, within which systematically 12 households are selected. All members of 15 years of age and over from 12 households of each of these 2000 enumeration districts are interviewed (about 55 000 persons). According to the rotation scheme, 6 of these 12 households (1/2) are replaced in the next survey. The results are adjusted in accordance with the current demographic statistics data.

III. Main definitions used

5. The basic methodological concepts and definitions are set according to the international standards on similar surveys in other countries and the International Labour Organization (ILO) recommendations.

Labour force - employed and unemployed persons, 15 years of age and over.

Employed persons - all persons, 15 years of age and over, who during the survey period:

- a) worked at least 1 hour on producing goods and services for payment in cash or in kind, profit or another income;
- b) were temporarily absent due to leave, illness, pregnancy, maternity leave, bad weather, strike, labour/management dispute or other similar reasons.

6. **Employed persons** are all those who did all work as paid employees (in cash and in kind), managed their own enterprise, firm, farm or profession, or in other business of their own; those who worked as unpaid workers in family-operated firm, enterprise or farm. Students, housewives and pensioners who have worked at least 1 hour during the survey period are included in the employed.

7. **Unemployed persons** are those persons, 15 years of age and over, who did not work at all during the reference period, but were actively seeking a job within the preceding four weeks and were available to start working within a defined short period of time. Exceptionally, persons who did not actively seek a job, but who expect to start a new job within 30 days, and persons who, on guarantee, are awaiting recall at a fixed date to a job from which they had been laid off for more than 1 month, are also classified as unemployed. Students, homemakers, pensioners and other persons who are usually not economically active are considered as unemployed during the reference period if they meet the above definition of unemployment.

8. **Persons not in the labour force** are those persons who are not classified as employed or unemployed. Not in the labour force are all persons on additional paid or unpaid extra maternity leave.

9. **Status in employment** - according to the status in employment, persons are classified in the following groups:

- a) employers - persons who manage their own enterprises (firms, farms) sole or in association with other people; those who work on lease or perform other work employing one or more persons;
 - b) own-account workers - persons who manage their own enterprises (firms, farms) sole or in association with other people; self-employed and those who perform other work without employing other persons. The members of producers' co-operatives are also included in this group;
 - c) employees - persons who work and receive compensations in cash or in kind as salary or wage, remuneration under civil contract, in public enterprises or for private employer;
 - d) unpaid family workers - persons who work without payment in family-operated enterprise or farm.
- Activity rate - ratio between labour force and population of 15 years of age and over.
 Employment rate - employed population related to the population of 15 years of age and over.
 Unemployment rate - ratio between unemployed persons and labour force.

10. Labour Force Survey provides statistical data for the forms, dynamics and structure of employment and unemployment. In the years of restructuring of the national economy, the decrease in employment (366,4 thousand less employed in 2001 than in 1993) and growing unemployment rate (since 1996 it reached its lowest level 13.7% and in 2001 it was 19.5%) are the constant features of the Bulgarian labour market.

11. For the period 1993-2001 the number of employed men decreased with 14.2% while the number of employed women decreased with 9.9%. As a result of privatization of the former state-owned enterprises and development of entrepreneurship, the number of employees in the private sector has grown with 73%, respectively the number of employees in public sector has fallen with 60% for the years between 1993 and 2001. The number of employers plus self-employed persons has grown with 9%.

12. The number of persons employed with primary and lower education fell with 49% between 1993 and 2001, while the number of employed with higher education has grown with 15%. This is the consequence mainly of increasing skill requirements regarding job content and new technological changes.

Table 1. EMPLOYED BY SEX AND STATUS IN EMPLOYMENT (NUMBER - THOUSANDS)

Status in employment	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	2994,6	2868,7	3031,5	3085,4	3030,1	2920,7	2811,0	2735,5	2628,2
Employers	50,3	46,6	54,6	60,9	59,2	69,1	70,0	67,7	91,2
Self-employed	242,6	199,4	244,0	262,6	293,7	274,0	259,5	259,5	230,8
Employees in private sector	336,4	461,6	542,6	646,6	747,4	889,2	990,7	1087,4	1225,8
Employees in public sector	2319,0	2130,5	2152,7	2070,7	1858,7	1641,4	1446,5	1277,0	1037,4
Unpaid family workers	42,1	24,9	31,4	40,0	58,7	40,6	34,4	30,6	37,1
Unknown	4,2	5,8	6,2	4,7	12,3	6,4	9,9	13,4	5,9

13. The percentage of people discouraged to find job people has grown by 52% and the percentage of long-term unemployed people has increased from 52.5% to 63.7% for the period 1993-2001, which is one of the main issues of the government's social policy.

14. The figures on employees working without any contractual agreement show that in 2001 96% of these employees were employed in the private sector; 11.6% of employees aged between 15-24 and 30.8% of employees with primary or lower education work without contract with their employers. In 2001, 84.3% of employed persons held a permanent job and 5.7% held a temporary job. Of those with a temporary job, 73% were employed in the private sector.

IV. Enterprises survey on labour

Object, scope and units of the survey

15. The enterprise survey on labour presents the so-called payroll statistics. The survey covers all legal units that perform a kind of activity during the calendar year. The main objectives of the annual survey are to collect data for estimating two of the key macroeconomic indicators characterizing the labour market: employed persons in all economic activities and the average annual gross earnings for the employees under labour contract. These indicators are primarily used for macroeconomic analysis and in the following year for government budget framework.

Main definitions used

16. **Gross earnings** relate to the remunerations in cash or in kind regularly received by each employee under labour contract. Included are:

- basic wages and salaries (also includes those in kind);
- remuneration and additional payments for extra working hours, night or shift work, working on weekends and official holidays;
- additional remuneration for work at specific and unhealthy work conditions;
- remuneration paid for statutory, contractual or voluntarily granted leave and public holidays or other paid days not worked;
- bonuses.

The employers' contributions to the social security funds are excluded.

17. The **average annual gross earnings** (before any statutory tax deductions or social-security contributions paid by the employee) are the total amount of earnings accrued during the calendar year divided by the average number of employees under labour contract excluding those on maternity leave.

18. **Employees** are all persons who have a direct employment contract with the enterprise and receive remuneration, irrespective of the type of work performed, the number of hours worked (full- or part-time) and the duration of the contract (fixed or indefinite).

19. The **total number of persons employed** is a sum of the number of all persons working under labour contract, working under non-labour contract, self-employed persons and the working business owners, registered in the enterprises during the year.

20. The main difference between LFS employment data and those from the Enterprise Survey is the different unit of observation - LFS based on households while the Enterprise Survey is based on enterprises. The enterprise employment data show the same tendency of decrease in employment as LFS; for the period 1995-2000 it is 9%. The fall in the number of employees under labour contract means that far fewer people are socially secured by their employers and protected by acting labour legislation. The increase in employment in the private sector of the economy reflects the privatization process and the development of entrepreneurship, mainly small-sized private businesses. The relation between employees in the public and private sectors has changed from 59%: 41% in 1995 to 71%: 29% in 2000. The overall decrease in employment reflects another dimension of employment quality – the turnover of employees. The negative balance between hired employees and fired employees has remained constant over the years. It is also influenced by liquidation and closing of many of the large public manufacturing enterprises - the number of employees fired due to closing down of the enterprise or reduction of the volume of work has increased by 53% from 1995 to 2000.

Table 2. Average annual number of employed persons, employees and turnover - whole numbers (Enterprises Survey)

	1995	1996	1997	1998	1999	2000
Employed persons	3282183	3285877	3157435	3152554	3087830	2980108
Public sector	1949404	1728375	1412094	1230370	1085162	869706
Private sector	1332779	1557502	1745341	1922184	2002668	2110402
Employees under labour contract	2078560	2242352	2155010	2086291	1994284	1900940
Public sector	1910215	1715872	1402906	1223415	1078048	858126
Private sector	168345	526480	752104	862876	916236	1042814
Employees hired during the year	399253	395284	590780	542806	548523	667355
Employees left during the year	429944	460125	686993	623108	684824	757432
of which due to closing down of the enterprise or reduction of the volume of work	70321	78338	128734	103972	156674	150767

21. The earnings figures show that the real wage in 2000 has fallen **with** 11.4% in comparison with 1995. In 2000, 58% of employees earned less than the average wage for the whole economy.
22. The statutory national minimum wage, set by the government since 1990, has a positive effect in guaranteeing a minimum level of payment for the labour supplied by employees, but plays a negative role for the growing rate of non-registered employment as employers aim to reduce their labour costs. The share of social security contributions, paid by employers in 2000, is 27.4 % of the total labour costs.
- V. Household budget survey**
23. The main aim of the household budgets survey is to produce reliable and scientifically grounded data on the income, expenditure, consumption and other elements of the living standard of the population, as well as on the changes which take place over the years.
24. The unit of observation is every randomly chosen ordinary household, irrespective of the number of members and their material and personal status.
25. The **total income** of household includes all monetary income and income in kind, irrespective of their sources.
26. The **total cash income** of households comprises all monetary receipts from wages and salaries, individual economic activity, property, money benefits from social security funds and insurance, pensions, family allowances, sick and birth payments and others, scholarships, gratuitously received money from relatives, friends and others.
27. The **income in kind** of households comprises the value of food and non-food products, obtained from the household plot, agricultural enterprises, friends and relatives as well as the value of the increase of farm products and animals. The evaluation of the income in kind is based on retail prices.
28. The **total expenditure** of the households includes all monetary and in kind expenditures made during the reference year for food and non-food goods and services.
29. The main source of income for the Bulgarian household is the working salary although, in the structure of total income, its share fell from 44.3 % in 1992 to 38.9% in 2000. The decrease is a

consequence of the decrease in the number of persons employed, the low increase of wages and salaries, increase of income from entrepreneurship, property and other sources.

30. The low level of payments at the place of the main job pushed workers to look for a second, part-time or temporary job under temporary labour contracts or without any contractual terms. The share of the second job related earnings grew from 2.1% in 1992 to 5.3% in 2000. The share of incomes from entrepreneurship doubled from 2.2% in 1992 to 4.5% in 2000.

31. The decrease in real income and real consumption is accompanied by considerable restructuring of consumer's expenditures, with an increase of the shares of expenditures for satisfaction of main needs for health care, education, electricity and water consumption. The income of Bulgarian households is spent mainly on food. For countries with a high standard of living, the expenditure on food is 15–20% of the total expenditure. In Bulgaria it was 44.1% in 2000. For the lowest income group this percentage came to 58.2%.

VI. Measurement of continual training

32. The first Continual Vocational Training Survey in Bulgaria was carried out in the year 2000 with reference year 1999 on the initiative and with the cooperation of Eurostat. The purpose of the survey was to obtain, on the European level, comparable key information concerning the training provided by employers to their employees.

33. The SVTS is a sample survey, stratified by 20 sections and subsections of NACE Rev.1: sections C, subsections of D (15-16, 17-19, 21-22, 23-26, 27- 28, 29-33, 34-35, 20+36+37), sections E, F, subsections of G (50, 51, 52), H, subsections of I (60-63, 64), subsections of J (65-66, 67), sections K to O, excluding section L Public Administration; and 3 size classes according to the number of employees (10-49, 50 – 249, 250+).

VII. Main definitions used

34. *Continuing vocational training* is defined as training measures or activities which have as their primary objectives the acquisition of new skills or development and improvement of existing ones and which enterprises finance, wholly or partly, for their employees who either have a working contract or who benefit directly from their work for the enterprise, e.g. unpaid family workers and casual workers. Continuing vocational training measures and activities include *continuing vocational training courses* and *other forms of continuing vocational training*.

35. Continuing vocational training courses could include those that were designed and managed by the enterprise itself (managed internally) and that were designed and managed by organizations, not part of the enterprise (managed externally).

36. Other forms of continuing vocational training include:

- planned periods of training, instruction or practical experience, using the normal tools of work, either at the immediate place of work or in the work situation;
- planned learning through job rotation, exchanges or secondments;
- attendance at learning/quality circles;
- self-learning through open and distance learning, (methods used in this type of learning can include using video/audio tapes, correspondence courses, computer based methods (including Internet) or the use of a Learning Resources Center);
- Instruction at conferences, workshops, lectures and seminars at which the aim of the employees attending the events is to learn/receive training.

37. The restructuring processes of Bulgarian economy are very dynamic. New occupations appear and they required new vocational skills. Simultaneously, all branches reduced their activity and unemployment increased. This radically altered the labour market. Basically, in Bulgaria the initial vocational training is carried out in vocational schools within the education system. The continuing vocational training is done in the enterprises themselves. The Labour bureaux and the Ministry of Labour and Social Policy play an active role in the professional qualification and re-qualification.

38. Data produced by SVTS describe the main features of the employers' training policy, type of continuous training provided, participants in the training courses – their socio-demographic status, time spent in training, employers' cost for vocational training, usefulness of the training provided.

39. Figures from the first CVTS show that in 1999, 10.5% of small enterprises (10 to 49 employees) introduced technologically new or improved products or services; for the medium-sized enterprises (50 to 249 employees) this percentage is 15.1%, and 28.1% for the large enterprises (250 and more employees). To the question of whether employers consider it important to increase labour force occupational skills and qualification; 40 % answered "yes" but only 2/3 of them had in practice provided qualification training for their employees in 1999. Generally, employers (67,5%) believe that they can employ the necessary labour force from the labour market instead of providing vocational training; only 7% would employ young or unemployed people under an apprentice/training contract and the rest answered that the main way for developing new skills is through use of the normal tools of work, either at the immediate place of work or in the work situation. Only 2.4% of the units in the surveyed population have their own training center.

40. The relationship between training and not-training enterprises in 1999 is 28.2%: 71.8%. A positive fact is that 61.6% of large enterprises provide different types of continuous training for their employees. Bearing in mind that more than 50% of employees in the real sector are hired in the large enterprises, it means that more individuals would have the possibility to increase their occupational knowledge and skills.

41. More of the enterprises in 1999 provided training to their employees in the form of training courses (58.7%). Of the other types of CVT, the most frequently used is the training at the immediate place of work or in the work situation (57.7% from all other provided types of CVT).

42. The share of the participants in the different forms of CVT from the total number of employed persons in the enterprises providing such training is 45.5%; 60% of all trained employees are men and 40% are women. In the reference year, 60% of the enterprises provide CVT for those employees younger than 25 years of age, 52.3 % for employees older than 50 years of age, 6.2% for handicapped, 24.3% for employees without any qualification, 6.6% for employees threatened with the loss of their job and 8.5% for part-time employees.

The reported costs for CVT were 2.3% from the total labour costs in 1999. Those employers not providing CVT state three main reasons for it – 82.4% think that the current level of qualification of their employees satisfies the needs of the enterprise, 71.4% say they employ persons with the necessary occupational skills and 37% declare that CVT costs are too high.²

VIII. Measurement of Work Accidents

Object, scope and units of observation

43. Data on work accidents are based on administrative sources in the National Social Security Institute. According to the adopted Code of Mandatory Social Security and the Registration and Report

² The total is higher than 100% as more than one answer is given.

Regulations of Work Accidents, the National Social Security Institute is responsible for establishing and maintaining the Work Accidents Information System, which includes data from declared forms of accident. This system covers all cases of work accidents which involved insured persons.

Main definitions

44. An **accident at work** is a discrete occurrence in the course of work, which leads to physical and mental harm. The following indicators for work accidents and formulae for their calculation are applied: **Frequency coefficient** is defined as the relation between the number of accidents and the average number of employees for the same reference period, multiplied by 1000; **Weight coefficient** is defined as the relation between the number of calendar days lost and the average number of employees for the same reference period.

45. The number of work accidents for the years between 1990 and 2000 has decreased nearly 3 times. It could be accepted that the level of safety at work has been raised during that time. However, the other reasons include the decline in the most risky economic activities: mining and manufacturing; bankruptcy of most of the biggest enterprises in these industries and growth of the trade and service sectors of economy.

Table 3. Accidents at work and related indicators

Indicators	1993*	1994	1995	1996	1997	1998	1999	2000
Accidents at work - thousand numbers	20.1	17.1	17.0	14.8	11.2	10.3	7.8	6.8
Number of working days lost due to accidents at work	531.7	449.4	443.8	408.5	305.0	294.3	232.1	323.5
Frequency coefficient of accidents at work (average number per 1000 employees)	12.4	12.0	12.5	11.2	9.1	8.5	7.2	3.58
Weight coefficient of workplace injuries (average number of working days lost due to accidents at work)	27	27	27	28	28	30	31	0.17

*Until 1999 the weight coefficient is calculated as a relation between working days lost and number of recreated accidents.

46. The data from statistical sources show that the quality of employment during the long and difficult transition period towards a market economy in Bulgaria is a mirror reflection of the economic and social situation in the country.

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