

IS THE LABOR MARKET IN BULGARIA SEGMENTED?

The present study of the segmentation of the labor market in the country aims to enrich the existing body of knowledge relating to this issue. A methodological framework was elaborated to study the labor market segmentation by income and employment profiles, based on data from monitoring specific labor and specific income pursuant to individual observations of the National Statistics Institute. There is a link between a specific type of labor and a specific income in compliance with specific criteria to define available or non-available segmentation on the labor market. For the implementation of the specific assignments a survey methodology is proposed in conformity with the European Income and Living Conditions (EU-SILC) survey. Bulgaria is involved therein since 2006.

JEL: J42; J48

As a result of the changes, which occurred in Bulgaria, currently the labor market is structured differently with regard to employment and remuneration in comparison to the way, in which it was configured twenty years ago. The changes are dynamic and much more clearly pronounced with regard to the types and forms of employment as well as with regard to the forms and levels of labor remuneration. From this point of view the question whether the labor market is segmented is quite reasonable. There are several reasons for conducting the present study:

First: The topic of labor market segmentation is relatively seldom explored in Bulgarian economic literature. The segmentation of the labor market has not been the subject of an integral scientific study. Furthermore, the effects of segmentation on the motivation of the labor force to participate in the labor market have not been explored, while this aspect reflects on the economic and social development of the country.

Second: The need for the present study also stems from the fact that the implementation of various (active and passive) labor market policies is often based on the differing positions of a series of groups of workers on the labor market with regard to their access to employment and sustainability of employment. A series of strategic documents refer to the existing segmentation and characterize the labor market as segmented without defining the criteria under which the pointed groups are considered as segments.¹

Definition and methodological approach for studying labor market segmentation

The analysis of the theoretical conceptions for segmentation of the labor markets indicates, that the distribution of the employed in accordance with their

¹ MSLP. Updated Employment Strategy of Republic Bulgaria 2013-2020..., p. 15; MSLP. National Action Plan on Employment 2014 ..., p. 29.

labor remuneration is a fact, which does not stem directly from the quality of the labor force, i.e. from the education, qualification, profession. In other words, individuals from the labor force with analogous qualitative characteristics are characterized by different levels of remuneration. The reasons for that are external – labor union agreements or a monopolistic environment, specific state policy for protection of specific professions or groups from the labor force, as well as a consequence from the so-called segmentation of the labor markets into primary and secondary ones. The studies of the segmented labor markets incorporate a wide spectrum of views, *while the common hypothesis is that there are segments on the labor markets and that the problems relating to the distribution of income (salary), unemployment and discrimination are the result of that segmentation.* Some studies are fairly close to the neoclassical theoretical conceptions, while others have a fundamentally different starting point.²

In the context of the different approaches and models, the following definition has been formulated for the purposes of the present study: *we assume the existence of labor market segmentation in cases, when there is “stability” of labor remuneration, i.e. during a given period there are no changes in labor remuneration (or there is merely a transition from one level of the devised labor income scale into the next). More dynamic transitions between the levels of the scale – a transition across one or more levels, indicates that the labor market does not limit the movement along the income scale and that it does not contain elements of segmentation.*

The proposed methodological approach includes:

First: Elaboration of a theoretical model for evaluation of the segmentation in terms of its elements and main characteristics. For that purpose, the income from labor for the period 2006-2011 is ranked on a scale of one to six, where the first three groups are below the median for the respective year, while the other three exceed the median. Subsequently, the mobility at the individual level is traced; i.e. tracking the changes in the position of the individuals within the household, which receive income from labor during the analysed year, and identifying where their mobility falls on the aforementioned scale.

Second: Formulation of theoretical hypotheses about risks regarding the segmentation of groups on the labor market and selection, from the multitude of analysed households, of these groups. Tracing of the mobility of these groups on the basis of specific criteria such as change in the incomes from labor, changes in employment and professions.

Third: Selection of the source of statistical information and empirical studies for the purposes of testing the model. The following sources of information are used – national statistical study “Statistics on Income and Living Conditions (EU-SILC)”, which examines 7300 households and presents individual observations

² Piore, 1983, p.240-253; Boyer, Smith, 2001; Taubman and Wachter, 1986, p.1183.

Is the labor market in Bulgaria segmented?

about their members. This information is collected since 2006 and allows for the profiling of employment and the income from labor since that year until 2012. On the basis of these profiles, the study analyses the data and presents the actual situation from the six-year period regarding the profiles of employment and labor remuneration.

Fourth: Analysis of the individual data from the specialized monitoring of households in Bulgaria, mentioned above, and data from a sociological study, performed for the purposes of the present study.

Fifth: Drawing a comparison and conducting an assessment of the results from the examination of the various sources of statistical data in compliance with the goals and hypotheses set forth by the study on the basis of a selection of statistical sources, incl. time series for a select period of time.

The starting point of the grouping of labor incomes is subdividing them into low, median and high incomes. The economic literature and scientific practice provide different definitions for their diversification.³ In the present study the low, median and high income groups are defined as follows:

- *Low incomes* – 2/3 of the gross median annual income of all employed individuals (part- and full-time employment);
- *Median incomes* – within the range from 2/3 to 4/3 of the gross median annual income of all employed individuals (part- and full-time employment);
- *High incomes* – exceeding 4/3 of the gross median annual income of all employed individuals (part- and full-time employment).

As a means to more thoroughly diversify and trace the stability of the characteristics of the labor force, two sub-groups have been designated within each of the aforementioned main groups. Hence, six sub-groups have been formed. Their thresholds are as follows:

- First group – Employed individuals with the lowest income – 1/3 of the gross median annual income from labor;
- Second groups – Employed individuals with low income – from 1/3 to 2/3 of the gross median annual income from labor;
- Third group – Employed individuals with under median income – from 2/3 to 3/3 of the gross median annual income from labor;
- Fourth group – Employed individuals with above median income – from 3/3 to 4/3 of the gross median annual income from labor;
- Fifth group – Employed individuals with high income – from 4/3 to 5/3 of the gross median annual income from labor;
- Sixth group – Employed individuals with the highest income – exceeding 5/3 of the gross median annual income from labor.

³ Grimshaw, 2011; Lucifora, and Salverda, 1998; Marx, and Salverda, 2005; OECD,(2004, 2006, 2009; European Commission, 2003, 2004; Levine, 2012; Panchev, 2013.

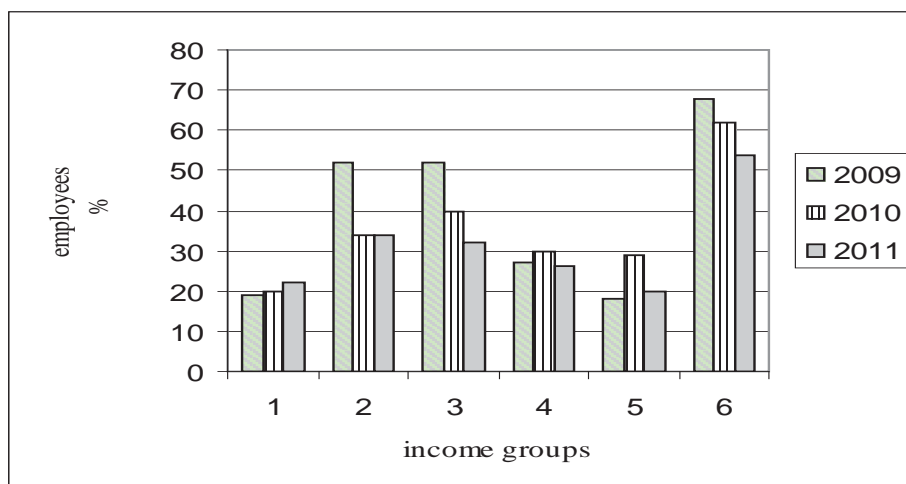
Main findings for segmentation of employment (based on longitudinal data of “Statistics on Income and Living Conditions (EU-SILC) survey”

Under the adopted definition and methodological approach of analyzing the labor market from the point of view of employment mobility in selected income scales the above analyses enable to point out specific features as follows:

1. In the six selected income groups the relative share of the persons with stable employment (i.e. persons, which have over the years not transitioned into another income group or have merely transitioned into the adjacent group) increases as the income level increases until it approaches the median income level, after which a process of decreasing of the segmentation is evidenced (Fig.1)

Figure1

Employees who remained in the same income group in the period 2009-2011 (shares)



Source. NSI, EU-SILC database.

2. Over the years, within the income groups, the relative share of the persons with “stable” employment varies considerably. This applies to both the individuals, which remain within the same income group, and to the ones, who moved adjacent income groups.

3. When tracing the share of the employed, who remain in the same income group, it should be pointed out that this share is the highest one in the sixth income group (68-55%) and is significantly lower in the other income groups (19-22% in the first and fifth income groups).

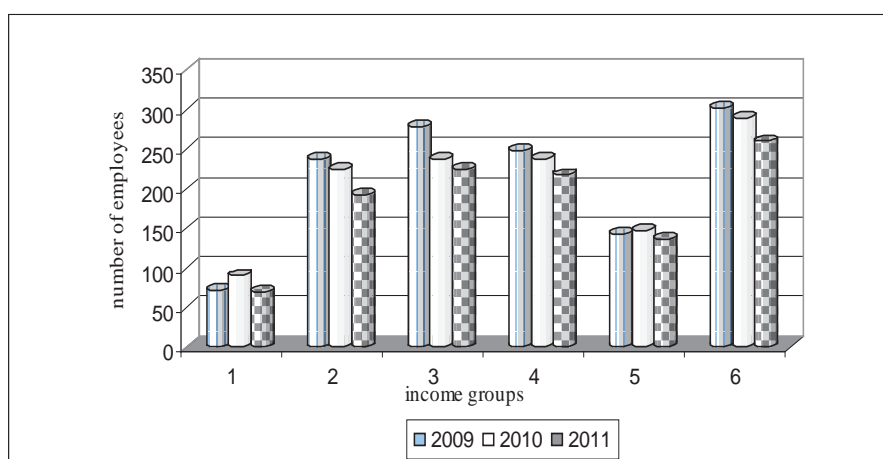
4. The examination of mobility of the employed between two adjacent income groups indicates that the share of people with stable employment increases

Is the labor market in Bulgaria segmented?

considerably – up to 61% in the first group, between 65-76% in the second group, between 67-86% in the third group; between 66%-74% in the fourth group, between 73-79% in the fifth group and between 69-80% in the sixth group. It should be pointed out that the relative share of the persons with “stable employment” decreases over the years, particularly in the higher income groups; for example, in the sixth income group this share decreases from 80% in 2009 to 54% in 2011 (Fig. 2).

Figure 2

Employees with segmented employment (2008-2011)



Source. NSI. EU-SILC database.

5. Two income groups – the first and the fifth, are characterized by the lowest level of segmentation of employment. This can be explained by the fact that the low level of remuneration in the first income group stimulates the mobility of the individuals as they seek opportunities for transition into a higher income group or leads them to drop out of the labor market and enter the sector of “shadow” employment. Regarding the “stability” of employment in the fifth income group, which is characterized by higher incomes in comparison to the median, the explanation for the relatively lower mobility of employment compared to the one registered in the third, fourth and sixth income groups is conditioned by the fact that the number of individuals, who moved to the adjacent income groups, is higher in comparison to the number of people, who remain in the same group; i.e. there is comparatively high mobility towards adjacent income groups, but the presented evidence is also explained by the fact that the total number of people in this income group is nearly two times smaller in comparison to the other groups.

6. The segmentation of employment in the second, third and fourth income groups is characterized by nearly identical tendencies – towards decrease.

7. The highest income group registers the highest level of segmentation of employment; however, the pronounced tendency towards decrease indicates that this segmentation is not characterized by sustainability in the medium and long-term period.

8. The mobility from the low income (first and second) groups towards the higher income groups is comparatively limited, while the transition from the higher income groups towards the lower income ones (incl. transition over two or three income groups) is more intensive and indicates that the “segmentation” is unsustainable and dropping out from the highest to the lowest income level is quite possible.

9. The profiles of the individuals, for whom the study identified signs of employment segmentation, indicate that, depending on the income group, there is evidence of segmentation based on gender as follows: in the lower income groups (first and second) the women are the ones capable of sustainable employment and apparently lack sufficient opportunities for move into other income groups. In the third income group, which represents the median income, the two genders are equalized, while in the higher income groups the tendency is reversed – the employment of the men is sustainable. These observations are not unanticipated and, from another standpoint, they reinforce the thesis that the women on the Bulgarian labor market are in a more unfavourable position with regard to labor remuneration and the existing possibilities for career development.

10. The age characteristics of the people, for whom the present study identified segmentation of employment, also indicate variations depending on the income group. For example, in the low income groups, the people aged 45-50 are clearly impeded from moving to higher income groups. As the income level increases, the age groups decrease, placing the younger workers aged 35-44 years in the position of segmentation, i.e. stability of employment; in the fifth income group, alongside the aforementioned age group, are the young workers aged 25-34. It is interesting to note that in the highest income group the age groups with a stable employment status change and the ones aged 55-64 dominate.

11. The educational level of the persons, which are subject to segmented employment, also varies depending on the income group; however, the persons with secondary education are the ones characterized by the most clearly pronounced segmented employment. In the two highest income groups the persons with higher education assume the first position. As a whole, it can be concluded that there is a correlation between the educational level and the segmentation of employment in the sense that the stability of labor increases as the educational level of the employed increases.

12. A characteristic, which directly relates to the segmentation of employment, is full-time employment. This statement is reasserted in all income groups and comes to show that the individuals, which are employed full time, have much more significant opportunities to remain employed and in the respective income group in comparison to ones, which work part-time.

Is the labor market in Bulgaria segmented?

13. The professional experience and length of service are also a factor for the segmentation of the labor market in the high income groups.

14. The professional and sector aspect of the segmentation of employment should mainly be examined at the micro-level, since both the professional and the sector nomenclature at the macro-level is aggregated to an extent, which makes it difficult to identify the specific characteristics of a given profession as a prerequisite for segmentation of employment.

15. An important aspect of the analysis of the segmentation of the labor market is the existence/lack of barriers to entry of a particular market, faced by individuals, which are outside the labor market or still part of the educational system.

**Main findings for segmentation of the employed based
on panel annual data of “Statistics on Income and Living Conditions
(EU-SILC) survey”**

Structure of the lowest income group

The lowest income group encompasses a relatively small contingent of employed individuals. Less than 10% of all employed individuals fall within this group. The main characteristics of the group may be summarized as follows:

Educational level. It mainly encompasses employed individuals with lower and secondary education. Their share comprises approximately 90% of all employed persons from the income group, while the share of the people with lower education is nearly equal to the share of the ones with secondary education (between 40-50%).

Professional structure. Representatives of a large number of professions fall within the lowest income group. Several professions are characterized by the highest concentration, amongst which are cleaners and helpers, agricultural workers, workers from the extraction and processing industry as well as various specialists, engaged in the provision of personal services. The professional structure of the employed individuals from the group is characterized by significant instability.

Sector representation. The sector structure of the lowest income group is difficult to categorize due to the large number of unidentified employed individuals. The largest share within that group is comprised by the agriculture, forestry and fishery, the processing industry, construction, commerce and repairs.

Gender representation. The principal position is assumed by the men. They represent more than half of the employed individuals from the group. However, their share decreases, which is a sign of increased instability.

Contractual relations. It is difficult to characterize more precisely the structure of the contractual relations in accordance with the type of labor contract because of the large share of respondents, who have not specified that. Around one third of the employed have permanent contracts, while fixed-term contract represent nearly one fourth of the total. The lowest income group is characterized by a large number of self-employed individuals. Considerable fluctuations (between 39-59%) have been

registered over the examined years, while there is no clearly pronounced development trend. Full-time employment dominates within the income group. Despite that, the representation of part-time employment is high. The registered tendency is towards increase; its share reaches one third of total employment in the group.

Structure of the low income group

The second income group encompasses 16-19% of all employed individuals. Its scope is characterized by significant stability over time.

Educational level. The workers with lower and secondary education predominate, while the representation of the persons with lower education (under 30%) is significantly smaller in comparison to the first group. The representation of individuals with higher education is limited. The educational structure of the employed individuals from the group is very stable.

Professional structure. The main representatives of the professions are cleaners and helpers, personnel, engaged in the provision of personal services, retailers and qualified agricultural workers, generating produce for the market. These professions represent around 45-54% of total employment in the group.

Sector structure. The sector representation of the income group includes the same sector and economic activities as the lowest income group (agriculture, forestry and fishery, processing industry, construction, commerce and repairs).

Gender representation. The women comprise the larger share within the low income group. Their relative share is between 50-60%, tending to decrease.

Contractual relations. The structure of employment relations in the group is comparable to the one of the lowest income group. The employees with permanent contracts comprise more than half of total employment in the group, while the share of employees with fixed-term contracts ranges between 10-15%. Payroll employment represents 80% of total employment in the group. The share of the self-employed is between 12-20%. Regarding the duration of the working day, full-time employment predominates within the group. Its share reaches 90% of total employment in the group, while the share of payroll employment exceeds the share of self-employment.

Structure of the under-median income group

The group encompasses approximately one fourth of total employment. It has the largest scope, despite the more considerable fluctuations registered over the years. The main characteristics of the group are as follows:

Educational level. The employees with secondary education predominate. They represent two thirds of total employment in the group. Employees with lower education comprise around one fifth, while employees with higher education represent slightly more than one tenth. The educational structure of the employed is characterized by small random changes.

Professional structure. The main professional structure covers the following professions: cleaners and helpers and personnel, engaged in the provision of personal services. These two professions represent approximately one fourth of total employment in the group.

Is the labor market in Bulgaria segmented?

Sector representation. The sector structure of the under-median income group is defined by three sectors: processing industry, construction and commerce. These three sectors comprise around half of total employment in the group.

Gender representation. The female gender predominates within the group. The share of the women ranges between 52-53% and remains comparatively stable.

Contractual relations. Amongst the types of labor contracts, permanent contracts predominate. They represent around 71-82% of total employment in the group, while there is a definite tendency towards increase. The employees with fixed-term contracts comprise a small share (2-8%) and during the analysed years their share decreases. A limited contingent of self-employed individuals falls within the under-median income group. They comprise around 5-7% of all employed persons. Furthermore, the part-time workers are exceptionally few (1-3%).

Structure of the above-median income group

Around one fifth of all employed individuals fall within this group. The scope of the group varies within a small range during the analysed years. The income group has the following characteristics:

Educational level. The group is dominated by the individuals with secondary education. The share of employees with higher education exceeds one fifth, while the share of individuals with lower education slightly exceeds one tenth. The educational structure is characterized by a tendency towards decrease in the share of individuals with lower education and increase in the share of employees with secondary education.

Professional structure. It encompasses a wide range of professions, without any single one standing out. Solely the drivers of motor vehicles are more strongly represented. The professional structure is comparatively stable.

Sector representation. Similarly to the preceding group the processing industry, construction and commerce predominate. The representation of these sectors is characterized by high stability over time.

Gender representation. The men and the women comprise nearly equal shares; the men slightly prevail. The women comprise around 41-44% of total employment in the group. Gender representation is not characterized by clearly outlined tendencies.

Contractual relations. Permanent contracts assume the main position within the group. They comprise more than 80% of total employment in the group. The share of the employees with fixed-term contracts is limited to 2-3%. Payroll employment represents the main contingent in the group (around 96%). Almost all employees (employed and self-employed) work full-time. A mere 1-2% work part-time.

Structure of the high income group

The scope of the group is comparatively small. It comprises slightly more than one tenth of the analysed employees. Over time the group evidences exceptional stability. The main characteristics of the group are as follows:

Educational level. The employees with secondary and higher education are widely represented. The relative share of the employees with secondary education is around 60%, while the share of the individuals with higher education is around 31%. The educational structure is characterized by a tendency towards decrease in the share of employees with lower education and increase in the share of individuals with higher education.

Professional structure. The profile of the group is defined by several professions. These are the economic and administrative specialists, economic and administrative professionals, builders, metalworkers and mechanical engineers as well as drivers of motor vehicles.

Sector representation. More than half of total employment within the group is generated by the processing industry, construction, commerce and governance. The stability of the sector structure is not high.

Gender representation. Men dominate the gender structure (62-66%). There is relative stability with a slight increase in the share of the women during the last three years.

Contractual relations. The contractual relations within the group are characterized by a large and stable share of the employees with permanent contracts (more than 80%). There is a tendency towards decrease in the number of employees with fixed-term contracts. The proportion of payroll employment to self-employment is in favour of the former. The share of payroll employment is exceptionally high (around 96-97%) and remains stable over time. Regarding the duration of the working day, full-time employment predominates. Full-time employment comprises 97-99% of total employment in the group.

Structure of the highest income group

It encompasses approximately one fifth of the examined employees. The scope of the group is highly unstable (it is characterized by the most significant variation); there is no clearly pronounced tendency of development. The main characteristics of the group can be summarized as follows:

Educational level. The group mainly includes employees with secondary (47-54%) and higher (32-46%) education. The share of the individuals with lower education is small (6-13%). The educational structure is very unstable. The share of the employees with lower and secondary education decreases, while the share of the individuals with higher education increases.

Professional structure. The professional profile is diverse, without any clearly pronounced dominant professions. The main position is assumed by the administrative and business managers and specialists, the drivers of motor vehicles as well as the representatives of the scientific fields.

Sector representation. Representatives of the state governance, the processing industry, commerce, construction and transport fall within this group. The sector structure changes over time, which is an indication of the lack of stability.

Gender representation. It is characterized by considerable representation of men. Their relative share varies within the range 64-74%; however, the pronounced

Is the labor market in Bulgaria segmented?

tendency is towards a decrease (by nearly 10 percentage points). The share of the women increases during the entire period.

Contractual relations. They are characterized by a large share of employees with permanent labor contracts. They comprise more than two third of all employees in the group. Self-employment comprises a very small share (1-3%) within the group. Almost all employees work full-time. The structure of employment is characterized by a high level of stability.

The presented data and analyses of the distribution of labor incomes, depending on the main characteristics (education, profession, sector affiliation and contractual relations) allow for the formulation of the following conclusions:

- *The educational level* of the employed actively participates in the income segmentation:

- 1) Lower education is predominantly associated with low incomes. Nearly half of the employees with lower education fall within the low income groups;

- 2) Secondary education is associated with an even distribution of incomes. Amongst all employees with secondary education, nearly half (48%) have median incomes, while the ones with low and high incomes comprise approximately one fourth;

- 3) Higher education mainly segments the employed into the high income group (around 55% of all employees with higher education) and the median income groups (around one third).

- *Professional career opportunities* also exert a significant influence over the income differentiation and segmentation. Some professions segment the employed into the low income group (agricultural workers and support personnel); others predominantly ensure median income (the majority of professions), while a third group of professions are mainly associated with high incomes (administrative and business managers, scientific activity).

- *Sector affiliation* is a segmenting factor, which acts in opposite directions. Some sectors mainly provide low incomes (agriculture, forestry and fishery, hotel and restaurant management); others predominantly ensure high incomes (finance and insurance, state governance), while a third group of sectors are mainly associated with median incomes (the majority of sectors).

- *Gender representation* mainly segments men into the high income groups, while the women are segmented into the groups, which fall below the median. Regardless of this, the disparities in labor remuneration between men and women decrease;

- *Contractual relations* are a strong segmenting factor. The employees with fixed-term labor contracts, the self-employed and the ones, who work part-time dominate the low income groups, while permanent employment, payroll employment and full-time employment predominate within the groups with median incomes.

The analysis conducted on the basis of the panel data allows for the following summary observations:

1. The transition from low to high income groups is also associated with a change in the profiles, which is generally characterized by the following:

- A change in the educational profile in the direction of increasing the share of employed individuals with higher education;
- Restructuring of the professional profile from the professions, which require lower education, towards that the ones associated with high public and economic responsibility;
- Decrease in the disparities in the representation of the men and women with regard to labor remuneration;
- Transition from more flexible towards more solid contractual relations.

2. The income groups are characterized by differing levels of stability over time. This is due to both incidental components (partial replacement of the sample) and to the realized transitions from one income group into another. For this reason, the registered disparities in the stability of the profiles do not mean that there is a lack of income segmentation.

3. The profiling characteristics of employment exert a significant influence over the income segmentation on the labor market. The educational level, the profession, the sector affiliation and the contractual relations, to a large extent, determine the opportunities for falling within a given income group.

Main findings from the study of labor market segments in sector “Information technologies” (via surveying of employers)

The companies from the sector do not implement policies for deliberate division of labor. The surveyed companies declare that they do not implement policies aimed at the segmentation of the employed via their division on the basis of the accepted rules for formation of the primary market (characterized by high salaries, full employment insurance, good working conditions) and the secondary labor market (low salaries, insecurity of employment, partial employment insurance, more unfavorable working conditions).

At the company level, division of the hired personnel exists on the basis of the functional organization of the production process. This includes the division between employees with primary and auxiliary functions in the large and medium-sized enterprises. In the smaller companies the division of primary and auxiliary personnel is not part of the employment policy; hence, this can be explained by the fact that in the smaller enterprises the employed combine various functions for the purposes of completing the placed orders.

The type of labor contract (permanent and fixed-term) is not a criterion for the division of the employed in the majority of the surveyed companies. For a smaller number of companies whether the employees have a permanent or a fixed-term labor contract is of significance from the standpoint of the implemented staffing policy.

In some of the companies *the division of labor* is based on other criteria as follows:

- the type of position and the level in the hierarchy
- education, certification, seniority, communication and language skills

Is the labor market in Bulgaria segmented?

- however, for the larger share of the companies there are no other criteria for division of the hired personnel.

The fact that the majority of the surveyed companies declare a uniform level of job security across all employees is *an evidence for a lack of segmentation*

Regarding the question whether labor remuneration is a criterion for segmentation of the employed, the answers vary as follows:

(a) the salary does not depend on segments of the internal labor market, but rather on the performance of each employee;

(b) the salary of a part of the personnel is higher, but it also depends on the achieved results;

(c) the salary depends on other factors, but not on the classification of the personnel.

The receipt of additional bonuses, as part of the segmentation of the market into primary and secondary, is not a practice of the majority of the companies: almost all respondents indicate that everyone obtains such bonuses when results are achieved.

The working conditions are not a factor of segmentation – all surveyed companies declare that there is no difference in the working conditions provided to the hired personnel.

Regarding gender preferences upon hiring of the labor force, all respondents unanimously declare that such preferences do not exist.

Regarding the segmentation of labor market on the basis of age preferences it can be concluded that partial segmentation based on age exists. This is due to the fact that the expressed opinions defend two different theses: the first one is that young people are preferable from the standpoint of employment (five companies), while the second one is that age is of no significance and that professional qualities are what matters (seven companies).

The preferences with regard to education – a possible factor for labor market segmentation, indicate that the majority of the surveyed companies prefer to hire more highly qualified workers; on that basis it can be concluded that a certain level of segmentation exists. For another part of the companies, though significantly smaller, education is not a factor for segmentation; their declared preference is towards the professional qualities of the labor force.

Professional development can be characterized as a possible factor for segmentation of the employed, whenever one part of the hired labor force has access to various forms of development of their personal qualities, while another part does not. Since in the country professional development is not a priority at the micro-level, the present study needs to address two questions – the first one is whether corporate policy aimed at professional development is being implemented. The second question is whether there is a division of the labor force from the standpoint of their access to professional development, i.e. whether there are opportunities for equal access or segmentation of the employed with regard to the access to various forms of professional development. The provided responses

indicate that for the majority of the companies professional development is an element of corporate policy and that, both the primary and auxiliary personnel, has equal access to forms of professional training. One of the surveyed companies declares that it has no corporate policy aimed at professional development – it is a small company (with less than 50 employees).

Staff turnover, as a reflection of the mobility of the labor force, is an indicator of the free movement of the employed «from» and «into» employment. On segmented markets it is high, while on the primary labor market staff turnover is particularly low. In most of the firms staff turnover is evaluated as low; in a smaller share of the surveyed companies it is average and in a mere one percent of the surveyed companies it is high. I.e. in two thirds of the companies there is a market segmentation with regard to the mobility of the labor force, while in 20% of the enterprises the intensity of that mobility is average and in a mere 10% - the mobility of the employed is not characterized by an element of segmentation.

Further research and tracing of the turnover of the primary and auxiliary staff has been conducted with the aim of uncovering elements of segmentation; the underlying assumption is staff turnover would be lower for the primary personnel in comparison to the auxiliary one. The results indicate that in more than half of the companies the low level of staff turnover is analogous for the two categories of personnel, i.e. there are no elements of segmentation with regard to the mobility of the labor force. In another part of the companies, there are disparities in the mobility of labor – the staff turnover among the primary personnel is lower in comparison to the auxiliary one. There are other companies, however, where the reverse is evidenced – a high turnover of the primary and low turnover of the auxiliary personnel.

The analysis of the flexibility of the labor market in the sector and in the country allows for the formulation of conclusions about the extent to which the hiring and firing of the labor force is the result of specific sector conditions as opposed to legislative changes in the country, which impede the mobility of the employed and additionally stimulate the segmentation of the market. The responses vary as follows: (a) flexibility is low, both in the sector and in the country; (b) the flexibility of the labor market in the sector as well as in the country is median - this answer is not indicative of elements of segmentation; (c) the flexibility of the labor market in the sector is low, while at the country level it is average – this answer entails the existence of labor market segmentation in the sector; (d) flexibility in the sector is low, while in the country as a whole it is high. The latter response is also indicative of the existence of labor market segmentation in the sector. Since most of the companies indicate disparities in the flexibility level, it can be concluded that market segmentation, caused by low flexibility, exists in the sector.

The companies rank the main reasons for the existence of problems faced when hiring and firing employees as follows: in first place they rank the insufficient qualification of the labor force; the lack of qualified employees ranks second, while

Is the labor market in Bulgaria segmented?

the legal limitations to hiring foreign workers assume the third place, followed by high labor remuneration expectations and, in a minimum number of cases, the existing legal restrictions on firing workers.

It becomes apparent that the quality of the labor force and their professional skills are of chief importance from the standpoint of hiring. Hence, the majority of the companies positively answer the question whether they implement specific company policies aimed at maintaining the quality of the labor force; only two companies declare that they have no such policy.

What this policy entails becomes clear from the question, wherein the following policies for maintaining the quality of the labor force are enlisted: training programs and courses in specific technologies, assessment of the achieved results, periodic employee trainings, monthly company trainings, seminars outside of the company, week-long courses in the country and abroad, additional qualification and training. There are a total of nine respondents; one company has not provided an answer and two companies have no such policy. It becomes apparent that, while the level of inclusion of the employees in trainings and qualification improvement programs is comparatively low, relatively active corporate policy for supporting the quality of the labor force is being implemented in the sector.

The sizes of the surveyed companies are as follows: three of the companies are large – with more than 250 employees; four of the companies are medium-sized – with up to 250 employees and four of the companies are small – with up to 50 employees. The main activities of these companies include software development for the foreign market, development of software technologies, virtualization, manufacture of software and information technologies.

The main conclusion about the existence/lack of elements of segmentation in the sector “Information technologies” is that the hypothesis for significant labor market segmentation in the sector is not confirmed. The labor market is open to labor mobility and the main reason for that is the significant labor force shortage faced by the sector. Under those basic conditions, no policy for deliberate division of the work force is being implemented at the “sector” level. I.e, given the fact the demand for labor is higher in comparison to the supply of labor, there can only be elements of segmentation with the following characteristics: the division of labor is not based on sustainability and job security; it is not dependent upon the sub-division of the market into primary and secondary, yet such differentiation exists. Its characteristics are defined by the type of position and level in the hierarchy, by education, certification and seniority as well as by communication and language skills.

They are followed by characteristics such as age, education and length of service, while gender is not a characteristic, which determines the division of labor.

Thirdly, it should be pointed out that the corporate managers from this sector, find the internal market to be highly inflexible, which impedes the more active mobility of the labor force. However, higher mobility, if it were stimulated, would be faced by objective restraints resulting from the quality of the supplied labor on the labor market in the country, which does not comply with the demands

of the sector. Hence, the main corporate policy is focused on periodic training and qualification as well as on trainings prior to hiring.

The main findings from the three applied analytical approaches can be summarized as follows:

1. The presented methodological instruments could be used successfully to analyze the income segmentation on the labor market. They provide entirely objective and realistic results. The *a priori* distribution of labor incomes into six individual income groups (levels) and the stability of the flows between these groups, verified on the basis of two databases, indicate that the chosen approach is a functional instrument for evaluation of labor market segmentation.

2. The Bulgarian labor market is segmented with regard to labor incomes. The level of segmentation differs among the individual income groups. The following correlation has been found: the degree of segmentation of the employed increases up to the median income level, after which a process of decrease is evidenced up to the fifth group. The degree of segmentation is highest in the highest income group. Furthermore, it has been evidenced that the transition from the low income groups (first and second group) towards the higher income groups is comparatively limited, while the mobility from the higher income groups towards the lower income groups (incl. transition across two or three income groups) is more intensive and indicative of the fact that the "segmentation" is unsustainable and that transition from the highest to the lowest income level is possible. The assessment of the mobility of the employed towards adjacent income groups indicates increasing stability of the segmentation.

3. The longitudinal and panel data used in the study yield very similar results with regard to the profile structure according to the selected indicators (education, economic activity, profession and others). Upon transition from the lower to the higher income groups, significant changes in the profiles occur; they have the following characteristics:

- With regard to the educational level, the evidenced tendency is towards increase in the share of the employees with higher education. There is a correlation between the educational level and segmentation of employment in the sense that the stability of employment increases as the educational level of the employed increases.

- The professional structure of the income groups changes from workers, who perform basic activities, towards administrative and business managers, who assume a high degree of responsibility. This correlation is further reasserted by the analysis of the two groups of databases.

- No significant changes in the sector structure of the income groups have been evidenced. The sectors agriculture, forestry and fishery, commerce, construction and others dominate the low income groups, while the high income groups are dominated by state governance, transport and the processing industry.

- Changes in the segmentation by gender are evidenced in the income groups. Women predominate in the groups, which fall below the median (with the exception of the lowest income group), while men dominate the groups above the

Is the labor market in Bulgaria segmented?

median. In the higher income groups the disparities between the labor incomes of the men and the women decrease.

- According to the contractual relations, the profiles in the income groups are also subject to considerable changes. Those changes represent a transition from more flexible contractual relations toward fixed ones. The low income groups are characterized by a large share of employees with fixed-term labor contracts and part-time employment. The self-employed individuals also fall within those groups. The high income groups are mainly represented by employees with permanent contractual relations and full-time employment.

4. The main characteristics of the employed exert a significant influence over the income segmentation of the labor market. This correlation has been identified by analysis of the two information sources. The influence of the main characteristics can be summarized as follows:

- Lower education segments the employed into the low income groups, while secondary education is associated with uniform income distribution. Higher education mainly segments the employed into the high income groups.

- Certain professions segment the employed into the low income group (agricultural workers and helpers); others are predominantly associated with median incomes (the majority of professions), while a third group of professions is associated with higher incomes (administrative and business managers, scientific research activities).

- Sector affiliation is a segmenting factor, which acts in opposite directions. Some sectors mainly provide low incomes (agriculture, forestry and fishery, hotel and restaurant management); others predominantly ensure high incomes (finance and insurance, state governance), while a third group of sectors are mainly associated with median incomes (the majority of sectors);

- Gender representation mainly segments men into the high income groups, while the women are segmented into the groups, which fall below the median. Regardless of this, the disparities in labor remuneration between men and women decrease.

- Contractual relations are a strong segmenting factor. The employees with fixed-term labor contracts, the self-employed and the ones, who work part-time fall within the low income segment, while permanent employment, payroll employment and full-time employment mainly fall within the median and high income groups.

Bibliography:

Boyer, G. R., R. S. Smith (2001). The development of the neoclassical traditions in labor market. Cornell University, <http://digitalcommons.ilr.cornell.edu/articlesm>

Lucifora, C. and W. Salverda (1998). Policies for Low-Wage Employment and Social Exclusion in Europe. Milan: Franco/Angeli.

Leontaridi, M. (1998). Segmented labour market: Theory and Evidences, Vol. 12, issue 1, February.

Marx, I., W. Salverda (2005). Low-wage Employment in Europe: Perspectives for Improvement. Leuven: Acco.

Panchev, S. (2013). Defining and Measuring the Middle Class in Bulgaria. Institute for Market Economy (*in Bulgarian*).

Piore, M. J. (1983). Labor market segmentation: to what paradigm does it belong? - American Economic Review, Vol.73, N 2, p. 240-253.

Stoilova, R., K. Haralampiev (2010). Gender inequalities and the role of the state for their decrease. International comparative study (*in Bulgarian*), kaloyan-haralampiev.info/wp-content/uploads/2010

Taubman, P. and M. L. Wachter (1986). Segmented labour markets. - In: O. Ashenfelter and R. Layard (eds.). Handbook of economics, Vol. 2, chapter 21. Elsevier Science Publication.

European Commission (2004). Employment in Europe 2004. Luxembourg.

European Commission (2005). Employment in Europe 2005. Luxembourg.

MLSP. Updated Employment Strategy 2013-2020 (*in Bulgarian*), www.mlsp.government.bg

MLSP. National Action Plan in the field of Employment 2014 (*in Bulgarian*), www.mlsp.government.bg

OECD (2004). Employment Outlook. Paris.

OECD (2006). Employment Outlook. Paris.

OECD (2009). Employment Outlook. Paris.

6.III.2004