

***И.В.Зенькова* Направления развития рынка труда: теория и методология**

Relevance of the study of the mechanism of sustainable development of aggregate labor market is driven by the need of working out adaptive to the dynamic social and economic environment mechanisms to optimize the labor force at all levels of the economic system to achieve the advanced labor productivity growth over the rate of wage growth.

The theoretical foundation of the doctrine of the labor market was founded by the representatives of the classical school in economics. Then the theory of coordinated development of the labor market with the development of the educational market appeared in a variety by research of such outstanding researchers economists as: J.M. Keynes [1], A. Marshall [2], J.R. Hicks [3], A. Bulatov, R.G. Ehrenberg, U. Asanovich, M. Chepurin, V. Gimpelson, R. Kapelushnikov, A. Korovkin, S. Kuzmin, Y. Odegov, C. Roshchin, T. Chetvernina, P. Shlender, R. Freeman [4], J. Konings, G. Renshaw, A. Vankevich, V. Loktseu, N. Marozava, H. Kandaurava, L. Tsikhanava, Z. Yuk, Klunya V.L., M. Piluy, O. Dodonov [5], I. Ziankova [6].

Methodological tools were worked out in the modern research:

The demand equation model by V. Gimpelson, which takes into account interrelation between the variables: wages, dynamics of production volume, vector of control variables characterizing structural features and financial and economic situation of enterprises.

The equation model of labor supply for a decision on labor was suggested by M. Killingsworth. It takes into account interrelation between the variables of unearned income, market wage and a set of socio-demographic and economic characteristics of an individual which determine its individual value of free time.

The model of labor demand by J. Konings and H. Lehmann, which shows the demand volume for labor, wages, capital value, material inputs, real output of production as the determining factors.

The model of labor demand by E. Denison, G. Psacharopoulos and M.J. Bowman which takes into account the quantity of the volume of production, efficiency of a unit of labor depending on education, the amount of capital.

A new theoretical approach to sustainable development of the labor market in order to strengthen the competitiveness of the economic system has not been still formulated. A complex research into indicators of sustainable development of the aggregate labor market is absent and the criteria for the competitiveness of the national economy are not specified, the theoretical approach to understanding of "the stable aggregate labor market" is not fully developed. The specificity of changes in production and technological parameters of workplaces in the new economics has not been still identified and the level of influence of the coordinated development of the labor market with the educational market on the competitiveness of the different levels of economics is not estimated. Mechanisms of management of educational processes are in need of serious study in order to increase efficiency of employment in the medium term.

Nowadays in the Belarussian scientists' research methodological bases for planning of the professional and qualifying structure of labor resources according to the demand on them, issues of the sequence of the educational market with the labor market on the micro-, meso- and macro level are not studied enough. Theoretical and methodological bases for the achievement of sustainable coordinated labor market development demand the revision of the fundamentals in the context of the innovative economics and the increasing of the competitiveness of the national economics. The object of the research the sustainable development of the labor market in the new economics on different levels of the economic system has been selected because of the inadequate elaboration of this issue and seems very important for the increase of the competitiveness of Belarus and its dynamic social and economic development.

The idea of the research into the improvement of methodological approaches to the sustainable development of the labor market determined the scientific hypothesis about the possibility of formulation of the concept of sustainable development of the aggregate labor market (taking into account the social and economic situations of the regions), it is based on the generalization and improvement of theoretical and methodological approaches to sustainable development of the labor market, complex analysis, working out of the methodological solutions to maintenance of an interrelation and consistency of the workforce structure and the training structure, working out the crisis management mechanisms of labor processes management on different levels of the economic system taking into account labor productivity and the wages, determination of the perspective areas of labor application according to the hierarchic levels of economy, creation of the communication channels to set up interrelation between manufacturing plants and educational institutions, methodological solution to planning of competence of specialists depending on technical and technological features of production development [12].

The basis for working out the conceptual basics for sustainable development of the aggregate labor market is the system of methodological suggestions. So, for the estimation of the innovational potential of the regional economy the author's strategic model of dependence of the changing of the innovative products in total amount of production has been worked out and tested. The peculiarity is that the following economic factors which strengthen the competitiveness of the national economy are taken into account [8]:

specific proportion of expenses on the innovations in total volume of the products;

the number of PhDs and full professors, carrying out research, per an organization doing research;

the output of the innovative production per an innovation enterprise;

a share of expenses on science and scientific research and elaborations in GRP (Gross Regional Product);

the number of employees doing research per an organization doing research;
the specific number of PhDs and full professors in the total headcount doing research;
GRP per an employee in the economy on average per year.

This model gives the opportunity to observe how the share of innovative production in total amount of the production according to each factor changes. The author's statistic model has been developed and tested to analyze the change of the number of the employed population on the micro level depending on economic factors. The economic factors are considered here: labor – intensiveness, the average monthly salary per worker, salary return, a capital intensity of the enterprise, average monthly output, share armament of the enterprise. The author's optimizing model has been developed and tested on consistency of a vocational professional structure of supply workforce and demand an regional labor market for the perspective analysis of professional qualification structure of the employer population proceeding from the information on dynamics of the number of graduates from higher educational establishments, natural increase (decrease) of the population, a share of labor costs in the general costs of production in industries. The factors are systematized, which have impact on the production efficiency growth, considering development of technological parameters of workplaces [24]. The feature of the proposed model consists in interrelation of the enterprise of a branch complex and republican level.

The author's statistical model has been developed and tested on counting losses of gross regional product in connection with irrational training of the staff in. The main elements of author's algorithm are: calculation of the coefficient of correction of a gross regional product due to irrational training of the staff with participation of the following economic indicators: coefficient of excess staff training, potentially possible number of the employed population with full employment in the region and the number of actually employed population in the region economy.

The methodical instrument of coordination of professional qualification structure of the offer of workforce and demand for it creation is formulated for formation in new economies economically expedient workplaces, which provide high labor productivity and salary [31]. The feature the key moments:

- 1) introduction into the model equation of labor demand which include of an indicator of laboriousness and production technological parameters of workplaces;
- 2) using of the coefficients of an associativity of work places, which allows to come to a calculated indicator of labor input of workers on various branch levels. We close approach O. Dodonova to enterprise performance according to which "increase productivity for any business especially in the economic crisis is the only way to increase labor costs, and increasing labor costs ..." [5, P. 183] ;
- 3) accumulation of information about the number of employees by gender, qualifications, education in the form of differential balance of labor resources and jobs;
- 4) using of the principle of energy cycling planning, explaining the logics of the research in production chains in interindustry level at the expense of an agreement of technological limits changes of the enterprises and branches as the basis for the approach.

The calculation of laboriousness for technological changes limits is characterized by details, flexibility to the changing volume of the production and technology; it considers the coefficients of an associativity of workplaces and allows to carry out the analysis of labor employment labor market of various levels of the economic system for achievement of effective distribution of workforce.

The economic factors are analyzed in the research; they influence the change of a share of innovative production in a total amount of an industrial output of Vitsebsk region. As a result of the analysis essential factors of the influence on a productive indicator are defined (change of a share of innovative production in the total amount of the industrial production in 2012 in comparison with 2008); increase in a share of costs on innovations in the total amount of production; the number of workers, who carry out scientific researches per an organization, which accomplishes scientific research (decreased from 44,8 people in 2008 against 33,7 people in 2012), which had a negative impact on a productive indicator. Increase in a gross regional product per one employed in economy on average in a year; the growth of the number of candidates and doctors of science in 2012, who carry out scientific research to 2,1 people per one organization which is carrying out scientific research against 1,8 people in 2008.

The analysis of Vitsebsk region showed that the number of workers with the higher education in the total number of the industrial and production personnel is in the zone of critical condition; the number of students of higher educational institutions per 10 thousand people of the population of the region is in the zone of a satisfactory condition; the indicators "level of depreciation of fixed assets" and "coefficient of the updating of the fixed production assets" are in a zone of a crisis state that shows a weak technological component of the innovative capacity of Vitsebsk region; indicators "specific heft of investments into fixed capital in gross regional product", "specific heft of costs on innovations in a total amount of the products", "share of costs on science and scientific research in the gross regional product" financial component of the innovative capacity of Vitsebsk region are in the zone of a satisfactory, and a crisis state respectively. The directions are defined in the research, which strengthen the development of innovative capacity of Vitsebsk region: preparation of highly qualified personnel and their involvement in innovative activity on micro and mesa level, increase in export of innovative production, acquisition of new more perfect machine, equipment, technologies which allow to produce innovative production, involvement of foreign capital in financing of scientific and innovative activity, activation of the processes of acquisition and using of the advanced production technologies, growth of a salary in science and scientific service that will

promote strengthening of motivation to scientific and innovative activity; development of effective regional policy.

In the research the optimizing model is tested for balance of a professional qualification structure and demand on the regional level. The author considers dependence of the number of employed is in the economics of Vitsebsk region from such factors, as retail turnover of commercial network, the number of graduates from universities and colleges, natural increase (decrease) of the population, share of labor costs in the general costs of production in industries with use of the covariance of sizes U (the numbers employed) and X (the considered determinants) [27]. The analysis revealed that there is no coordination when planning change of retail commodity turnover of a distribution network and change of the number of the employed population in the region economies. Since 2003 in the region there has been no coordination between planning the change of the number of university and called of graduates, the changes of the number occupied in the region economies. Since 2004 the specified categories have been in changing in one direction and with almost identical speed without rapprochement. The inverse linear relationship between the number of the employed population and the size of natural losses of the population is noted, i.e. with decrease in natural losses the growth of the number of the employed population on the regional labor market. The coordinated planning of change of migratory increase in population and change of the number of the employed population in the economics of Vitsebsk region [22]. The specified indicators change in one direction and with almost identical speed without rapprochement. Dependence is direct: the greater decrease in migratory decrease, the greater more the number of the employed. It showed inverse relationship between dynamics of a share of labor costs in the structure of costs of production and the number of the employed population on the regional labor market with the subsequent alignment of their development. At last, in the research the author's mathematical model for calculation of losses of a gross regional product in connection with irrational training is tested. So, in connection with irrational training in 2010 the losses of regional economics of Vitsebsk region amounted to 4,95 billion rubles. In our view, the importance of the formation of the nation formed by the following theoretical conclusions shows: firstly, synthesis of knowledge allows the company to generate institutional and organizational framework, including the production potential; secondly, knowledge is necessary for the organization to reach the result at the appointed time; thirdly, applied knowledge is an important factor in the development of pure knowledge in the economic system; Fourth, the actual possibility of obtaining income from the use of best knowledge and faculty of judgment based on the concluded contracts with producers [6, P. 300].

Discussion

In the research the concept of a sustainable development of cumulative labor market allowing to consider interaction between manufacturing enterprises and establishments of education in medium-term prospect is formulated. Its main stages are:

- 1) Development of a theoretical approach to innovative development of the economics, the development of methodological framework for assessing the innovative capacity of the region to strengthen its competitiveness;
- 2) The development of a theoretical approach to the coordinated development of the labor market with the technical and technological parameters of jobs and the market of educational services, the development of methodological foundations of planning vocational structure of labor supply under the technical and technological parameters of jobs;
- 3) Development of the methodology of planning professional-qualification structure of labor supply on the micro level with econometric methods.

It is based on the author's theoretical-methodological tools for sustainable development of aggregate labor market. Its features include:

- 1) In calculating the index of labor input on stage (detailed, flexible to the changing volume of production and technology that takes into account factors of conjugation of jobs that allow analysis at different levels of the economic system);
- 2) identification of production and technological parameters of jobs not only on installment of the equipment, technology, but already on the stage of the birth of the idea of creating new equipment and technology. In parallel, the possibility of harmonizing the work programs of educational and establishments technical and technological parameters of jobs;
- 3) the possibility of calculating the loss of gross regional product in connection with the irrational training.

The feature of the concept of sustainable development of aggregate labor market is to consider the aggregate labor market as a system of interaction between regional labor markets with a clear hierarchy, internal and external parameters of the system development; methodological decisions an assessing the effect of the coordinated development of regional labor market and educational services for sustainable development of aggregate labor market; methodological decisions on planning specialist competencies depending on the technical and technological features of production development due to the possibility of combining education cycles with cycles of innovation [30].

As economic indicators balancing sustainable development of aggregate labor market the following factors are justified: national and global migration, national, regional demographic processes, global demographic processes, the specificity of higher education in the world community, economic policy, as well as labor productivity, labor input, the share of high-tech products in gross regional product (GRP), gross domestic product (GDP), gross national product, GNP. the share of investment in technology, the index of GRP.

The concept will strengthen the mechanism of coordination of regional labor markets and the market for educational services for the sustainable development of the total labor market.

Scientific novelty of the mechanism of sustainable development of aggregate labor market is as follows:

- consideration of regional labor markets of the Republic of Belarus and the justification of the theoretical approach to the development of mechanisms for achieving sustainable aggregate labor market;
- the synthesis and development of mechanisms to control labor processes on different levels of the economic including labor productivity and wages, which will give the possibility to compare the wage growth relating to productivity growth and identify bottlenecks to optimize the number of workforce, and thus strengthen the position of competitiveness the national economy;
- critical analysis of the socio-economic development of the aggregate economic conditions of the labor market within the framework of the economic policies of various international economic groupings and identification of their degree of influence on the sustainable development of the Belarusian aggregate labor market, which allows to pursue comfortably and scientifically evidence-based policy of the country in the field of education in the context of global economic ties;
- the running mechanism to achieve a balance of employment on regional labor markets in the country, taking into account the effect of the index of employment abroad (residents and non-residents);
- development of the schemes in the harmonization of regional labor markets with regional markets of educational services, multi-level national system of education and the education system abroad, which is the core of the balancing harmonization of regional labor markets inside the national economic system and outside it;
- the development of the model of system interaction between regional labor markets within the national economic system and the regional labor markets of the external sector of the economy on the basis of economic indicators (see Above) which will contribute to the synergistic effect in the development of aggregate (national) labor market as a system.

The concept of sustainable development of aggregate labor market will allow to take into account the interaction between industrial enterprises and educational institutions in the medium term perspective in the national economic system and abroad.

As possibility for further development of research and practical application of the results the following areas are considered:

- further development of the methodology of strategic forecasting employment in conditions of transitive economics to create economically-viable jobs in the medium term;
- using in the practice of the Minister of Economy of the Republic of Belarus for the development of forecasts and programs of socio-economic development of the national economy and for the monitoring of the employment structure;
- using in the practice of the Minister of Labor and Social Protection of the Republic of Belarus in the development of state and regional programs to promote employment in the medium-term perspective to harmonize labor skills and technical and technological parameters of jobs to reduce the risks of natural redundancies;
- using in the practice of the Ministry of Education in planning the admission of students in higher and secondary specialized educational institutions in the context of professions in predicting general and additional needs of the economy of the country and its regions in interdisciplinary specialists.

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