



Mariia Krymova

PhD in Economics, Senior Researcher of Department
for social issues of the labour market, Ptoukha Institute for Demography
and Social Studies of the National Academy of Sciences of Ukraine

Oleksii Laushkin

PhD in Economics, Associate professor of Department
of Human Resources Management and Labour Economics,
Vasyl' Stus Donetsk National University

Nataliia Yakymova

PhD in Economics, Associate professor of Department
of Human Resources Management and Labour Economics,
Vasyl' Stus Donetsk National University

Methodology for Identifying Innovative Types and Forms of Employment of the Population of Ukraine

Absract

In the article the methodology for identifying innovative types and forms of employment of the population of Ukraine is developed, which consists of eight stages: conducting a research of employment in order to identify its innovative types and forms, identifying factors of influence on employment development; grouping factors that have the most significant impact on the development of innovative employment; allocating factors that determine the nature of employment and the characteristic features inherent in innovative employment; identifying and systematizing of criteria for assigning to innovative employment; developing of methodological bases for creation of a complex system of indicators of innovative employment; analyzing the current situation in the labor market and forecasting its development in the short and long term for the timely identification of innovative types and forms of employment; providing prerequisites for the development of innovative employment; monitoring changes in forms and types of employment with a view to timely identification and support from the state and business.

Keywords: transformation of employment, innovation employment, innovative types and forms, the algorithm determining factors and characteristics, system of indicators, forecasting, monitoring.

FORMULATION OF THE PROBLEM

Under today's conditions of development of the national economy, tendencies of a gradual decline in the level of employment in the manufacturing sector and, conversely, a significant increase in the level of employment in the service sector are becoming more and more visible. The above changes lead to changes in the structure and nature of employment, which greatly affect the state of the labor market of Ukraine and form new trends in its transformation. The structural changes taking place in the modern economy have certain regularities, namely: an increase in the share of high-tech manufacturing, telecommunications, financial and business services; emergence of new technological processes, usage of new technology, new types of raw materials and the production of new types of products; decrease in the share of the manufacturing sector and the growth of the service sector, deconcentration of industrial production, and shift in its sectoral structure. They form the strategic sectors of the national economy at the present stage of development, and are also the main causes of changes in the structure of employment in the labor market.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

Problems of employment are the subject of research by many scholars. Characteristics of the nature and role of employment in the economy can be found in the writings of A. Smith, D. Ricardo, T. Malthus, J.-B. Say, J. St. Mill, K. Marx, A. Marshall. Problems of the functioning of the labor market, employment and unemployment are investigated in works by L. Walras, J. M. Keynes, A. Phillips, M. Friedman, T. Veblen, J. Galbraith. Significant contribution to the domestic economic research of employment was made by S. Bandur, D. Bohinya, L. Beztelelesna, V. Vasilchenko, S. Vovkanych, O. Grishnova, M. Dolyshny, T. Zayats, S. Zlupko, L. Ilyich, A. Kolot, Y. Krasnov, E. Libanova, L. Lisogor, G. Mostovy, V. Onikienko, V. Onishchenko, I. Petrova, V. Petyukh, N. Titova, U. Sadova, L. Semiv, O. Homra, M. Shalenko, V. Shamota, L. Shaulskaya, L. Shevchenko and others. At the same time, the problem of identifying innovative types and forms of employment is pending and requires the development of effective tools and regulatory methods that should become the basis for providing a professional qualification balance in the labor market.

AIM OF THE RESEARCH

...is to develop methodology for identifying innovative types and forms of employment in Ukraine.

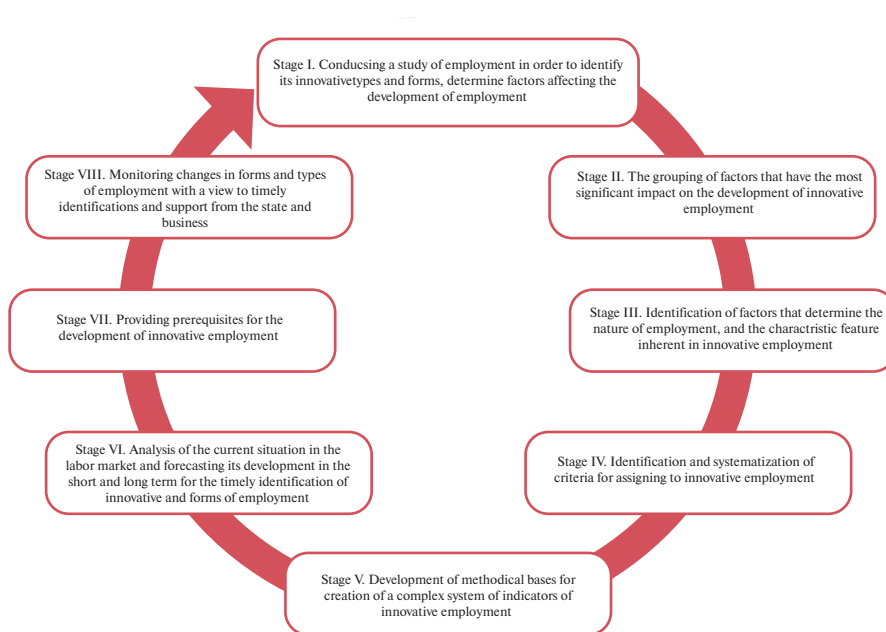
PRESENTATION OF THE MAIN RESEARCH MATERIAL

Under modern conditions, the process of transformation of the employment institute, which is characterized by the emergence of its new forms and types, intensifies in Ukraine. Thus, public policy should be aimed at promoting and facilitating

the transition to innovative forms employment. That is why the separation of new features of the sphere of employment and the definition of the prospects for its regulation is pressing and requires more detailed research.

On the basis of theoretical studies, it is advised to propose the following algorithm for identifying innovative types and forms of employment of the population of Ukraine (Fig. 1).

Fig. 1. Algorithm of determination of innovative types and forms of employment of the Ukraine population



Stage I. Conducting a study of employment in order to identify its innovative types and forms, determine factors affecting the development of employment.

The structural changes taking place in the modern economy have certain regularities, namely: the increase in the share of high-tech manufacturing, telecommunications, financial and business services; emergence of new technological processes, usage of new technologies, new types of raw materials and the production of new types of goods; decrease in the share of the manufacturing sector and the growth of the service sector, deconcentration of industrial production, and shift in its sectoral structure. They form the strategic sectors of national economies at the present stage of development, and are also the main causes of global changes in the structure of employment in the labor market.

Changes in the structure and forms of employment affect the value system of a modern employee and deepen differentiation in the labor market. Informatization

and intellectualization of the economy requires highly educated, highly skilled workers with a high communicative potential, able to produce new knowledge, ideas, methods and capable of learning, endowed with critical thinking, ready to change, free from stereotypes, endowed with such features of character as: purposefulness, perseverance, responsibility, discipline, innovation, adaptability, self-control, resistance to neuro-psychological overloads, high level of efficiency.

Stage II. The grouping of factors that have the most significant impact on the development of innovative employment.

An important methodological task is to determine the factors influencing the process of development of innovative employment and their classification as stimulators and disintegrators, taking into account that the forms and proportions of employment are dynamic, they change under the influence of many macro-, meso- and microeconomic parameters. Based on the research of scientific works it is expedient to distinguish the following groups of factors that have the most significant impact on the development of innovative employment: socio-economic, political-legal, industrial, cultural and institutional.

Socio-economic factors are economic reforms, leading to changes in socio-economic condition of the state, the presence of the shadow economy, economic activity, providing the supply of labor resources in the labor market. The group of socio-economic factors includes: general socio-economic conditions, quality of life, working conditions, material conditions and level of social protection, etc.

Political and legal factors influencing the innovative employment, regulate the legal aspects of employment and labor resource utilization, encourage entrepreneurs to create innovative jobs. These factors influence internal and foreign political stability, the main priorities of state development. The group of political and legal factors should include public administration, social, labor rights and guarantees that characterize the level of observance of rights and safeguards established by law.

Cultural factors are based on the general level of culture and mental characteristics of the population and appear as the labor potential of the population, the culture of work and employment behavior. Readiness for innovation, initiative, creative work, and desire to raise the vocational and educational level should characterize the labor mentality and be characteristic of modern Ukrainian workers. But under today's conditions of economic development, the level of innovation and creative activity of the Ukrainian population remains unsatisfactory.

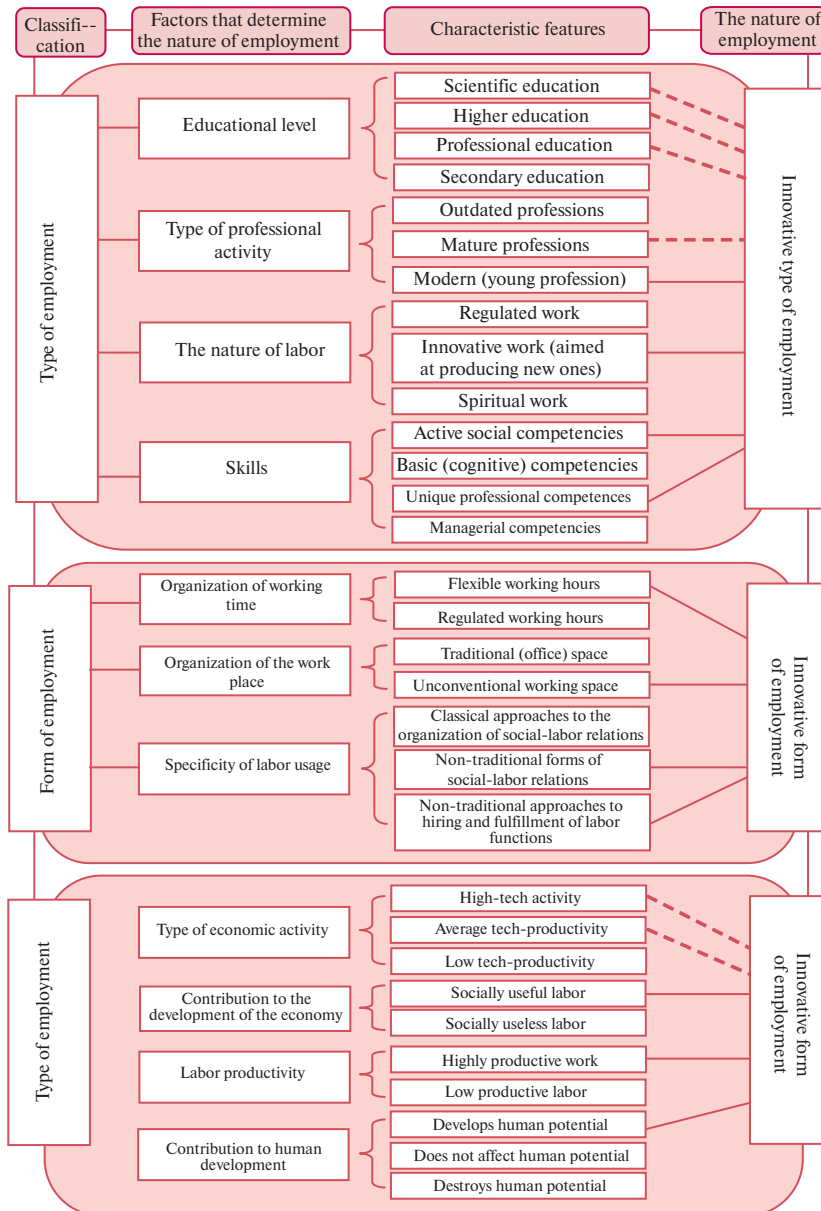
Production factors affect employment through innovative industrial economic structure, its change and development and through innovative processes in enterprises. *Institutional factors* affect employment through the regulation of social institutions and legal system to ensure employment issues.

Based on the research, it is expedient to allocate legal, organizational and economic methods among the methods of regulation of innovative employment of the population. *Administrative methods* regulate the legal means that make an impact on social and labor processes in employment. *Organizational methods* of regulating employment contribute to the implementation of measures for the organization, effective management and control activities of the state towards the development of innovative employment. *Economic methods* of regulation

of innovative methods of employment are a set of economic measures through which a government directly and indirectly influences social and labor processes in the workplace, contributing to significant economic results.

Stage III. Identification of factors that determine the nature of employment, and the characteristic features inherent in innovative employment (Fig. 2).

Fig. 2. Factors and characteristics that determine the type of employment



In the context of existing types, forms and types of employment, it is advisable to distinguish the following factors that determine the nature of employment, as well as the characteristic features for each factor that will determine the innovation of employment:

- for types of employment: education (science, higher, vocational or secondary education), the type of professional activity (older, mature or modern (young) profession), the nature of work (regulated, spiritual or innovative work), skills (active social, basic cognitive, unique professional or managerial competencies);
- for forms of employment: the organization of working time (flexible working hours or regulated), organization of the workplace (traditional or non-traditional office workspace), specific labor utilization (classic or innovative approaches to social and labor relations);
- for types of employment, economic activity (high, middle, low-tech activities), contribution to the economy (socially useful or socially useless work), productivity (high-performance or low-labor), contribution to human development (developing or destroying the human potential).

In the presence of a certain set of characteristics, it can be determined whether employment is innovative or not. For example, the type of employment in which an employee needs a high level of education, active social and unique professional competencies, in which innovative work and modern young people are present, should be considered innovative.

Stage IV. Identification and systematization of criteria for assigning to innovative employment.

At the present stage of development, the main criteria for assigning to innovative employment should be considered as follows:

- *functional and informative*: creative nature of work; high level of intellectualization of labor, usage of the latest innovative technologies; high level of communicative (communicative potential); production of new knowledge, ideas and methods; ability to learn, self-improvement; critical thinking; readiness for change; possibility of solving problems in non-standard ways, non-standard, non-template thinking, rejection of stereotypes; adaptability (ability to adapt and adapt to modern production requirements), purposefulness, openness, mobility; competencies (adapted for innovation); degree of comfort of working conditions, possibilities of professional self-realization;
- *organizational and economic*: increasing the share of high-tech industries, telecommunications, financial and business services; reducing the share of the manufacturing sector and the growth of the service sector; creating economic opportunities for the population through the development and implementation of economic policies aimed at developing new innovations and preserving existing jobs; dissemination of information technologies; formation of modern skills and competences in modern educational institutions of all levels of accreditation and forms of ownership, stimulation of their creativity, activity and initiative; increasing the motivation of employees to innovate labor; cr-

eating effective incentives for innovation, development of competition in the workplace; growing the needs of the economy in innovation work; growing demand for highly skilled workers in the priority sectors of the economy;

- *technical and technological*: the emergence of new technological processes, usage of new technology, new raw materials and new products; creation of a proper material and technical base; creation of favorable conditions for the development of creative potential of all subjects of employment relations – employers, hired workers, inter-mediaries in the labor market; increase of state and corporate financing of innovations; increase of state investments in science and education, support of enterprises financing training and vocational retraining of employees; balanced usage of tools and tools for adjusting the employment system.

Stage V. Development of methodical bases for creation of a complex system of indicators of innovative employment.

When conducting research on innovative types and forms of employment of the population of Ukraine, it is necessary not only to perform its qualitative analysis, but also to establishing relevant criteria and indicators. In modern literature, the problems of evaluating new processes in the field of employment in the transition to an innovative and creative economy are not disclosed. Statistics record only the change in the individual proportions of the distribution of labor resources (in particular, sectoral, educational, vocational and qualification). The analysis of most radical shifts is mainly qualitative.

An analysis of forms and types of innovative employment requires the development of scientific tools that allow for a quantitative and qualitative assessment of the current state and degree of its development. It involves the development of methodological, methodical and analytical foundations for the creation of a comprehensive system of indicators of innovative employment and its effectiveness from a socio-economic point of view. In developing such a system, it is advisable to follow requirements: ensuring the flexibility, transparency and availability of indicators and indicators in relation to different measurement conditions; analysing a sufficient number of factors that determine the formation of innovative employment; developing common approaches that will provide a unified methodological basis and comparability of indicators for interstate analysis of the processes of development of innovative employment.

It should be borne in mind that it is impossible to evaluate innovative employment with any single absolute or relative indicator. A set of variables to measure the employment of an innovative type should ensure that representative results are obtained. It is interesting to distinguish the following groups of indicators [1, p. 37]:

1. Proposals for the distribution of labor resources according to participation in socially useful work, which characterizes the level of labor innovativeness and identifies the directions of ensuring full employment. It was established that the increase of the level of innovation of labor contributes to increase of incomes of the worker, payment and working conditions, quality of life, increase of free time.
2. Structure of employment by types of economic activity, characterizing innovative employment. Under the current conditions of the national economy branch

structure of employment is characterized by low productivity and needs to increase employment in the service sector and science [2, p. 151].

3. Professional qualification structure of employees, exhibiting a degree of balance and combination of abilities of individuals and society's needs for skilled workers. Detection of the vocational qualification frame structure enhances the efficiency of intellectual capacity usage and ultimately the economic and social development of society. Existing professional and qualification employment structure in Ukraine is inefficient, characterized by a considerable share of low-skilled personnel, workers engaged in manual labor and emigration of highly qualified personnel.

4. Employment rate that characterizes the dynamics of the working age population in terms of demographic, social and economic changes in society. Ways of increasing employment is the motivation of people to productive, innovative and creative work, business, state supported job creation.

An important indicator determining the types and innovative forms of employment is the employment of economically active population. The structure of social production there is characterized by a significant reduction of the proportion of material production (industry, agriculture, construction) and increase in the share of the service sector (trade, financial activities). The larger is the share of profitable and progressive economic activities, the higher the productive employment [3].

Exploring priorities in the field of innovation employment it is advisable to distinguish areas and indicators of determining the level of realization of economic interests in the field of employment (government, employers, workers). The indicators determining the level of realization of economic interests are the growth rate of gross domestic product, gross domestic product at constant prices, employment, unemployment, the ratio of real wages and living wage for the employee, amount of social benefits, loss of working time, etc. The indicators determining the level of realization of the economic interests of employers are output per worker, working hours as a percentage of the fund of working time, turnover, number of employees in hazardous and dangerous working conditions and so on. The indicators determining the level of realization of the economic interests of workers are the dynamics of the average wage, ratio of the average wage and subsistence minimum level of salary arrears and so on.

Under modern conditions for workers is a more important to receive high income from labor, work in satisfactory conditions, have a professional growth but what is also important is the freedom of choice of occupation and place of work. For companies it is important to obtain high revenues through intensification of labor. For the state the primary purpose is to promote sustainable economic growth, improve living standards of employees by ensuring high productivity of employment, improving the competitiveness of the national economy, job retention and creation of new workplaces [3].

In developing the methodology for innovative types and forms of employment following groups of factors and conditions that are characteristic of innovative employment were determined:

1. Forming an effective state policy aimed at development of innovative employment (fostering appropriate level of institutional support to facilitate the develop-

ment of innovative employment; providing support for innovation-active enterprises, fostering self-employment, promoting innovative employment through tax incentives and direct costs, increased spending on science, education).

2. Encouraging people to innovative work (improving the quality of human capital, ensuring adequate public support of innovative progressive labor practices, focusing on the development of innovative forms and types of employment, formation of innovative work culture, focusing on labor mobility and flexible use of intellectual potential in the workplace).

3. Improvement of the system of education (providing a sufficient amount of qualified specialists, formation of an innovative type of employee, development of new forms and types of education, formation of innovative skills, creativity, ability to work in a team, innovative susceptibility).

4. Financial and organizational support for innovative employment in enterprises (spreading innovation-active enterprises that introduce staff development programs, creating a favorable climate for innovation enterprises).

5. Improvement and development of science, financial and organizational support of scientific activities (development and implementation of measures to improve quality of research activities, ensuring the process of perception and adaptation knowledge, creating new knowledge and technologies).

It is advisable to distinguish two approaches to building innovation indicators determining the types and forms of employment:

- building a system of indicators, each of which reflects certain aspects of innovative employment (technical, informational, economic, educational, professional, institutional and social indicators);
- building integrated (complex) indicator by which you can judge the degree of innovation of employment at a given level. Forming an integral indicator can also be based on several sets of indicators [4].

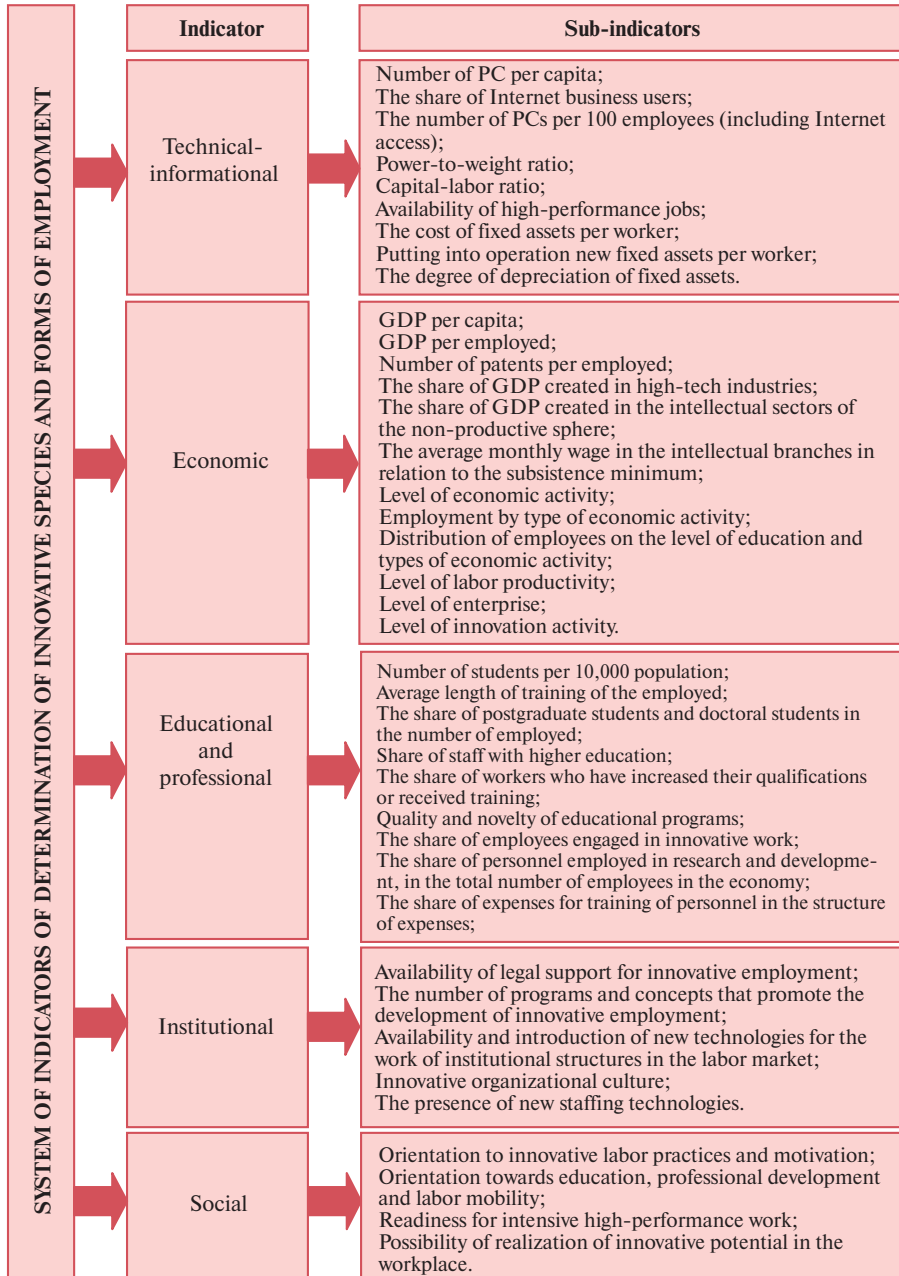
Identification of innovative types and forms of employment in modern conditions is possible by studying the system of indicators of employment. Fig. 3 shows a system of indicators determining the innovation types and forms of employment, which can be analyzed on the basis of official statistics. The scheme consists of the following units: indicators to determine types and innovative forms of employment, as well as indicators that reveal the content of the specified factors.

The proposed definition of indicators of innovative types and forms of employment Ukraine can be divided into the following units:

- *technical-informational* (the number of PCs per capita, share of the business Internet users, number of PCs per 100 employees (including Internet access), capital-labor proportion, availability of high-performance jobs, value of fixed assets per worker, introduction of new fixed assets per employee, degree of depreciation of fixed assets), economic (GDP per capita, GDP per person employed, number of patents per employed, proportion of GDP generated in hi-tech branches, share of GDP generated in intellectually-intensive areas of non-production sphere, average

monthly wage in intellectual fields in relation to the subsistence level, level of economic activity, employment by economic activity, the distribution of employees by level of education and economic activities, level of productivity labor, level of entrepreneurship, innovation activity);

Fig. 3. The system of indicators determining the innovation types and forms of employment



- *educational and professional* (the number of university students per 10,000 population, average duration of training of employees, proportion of graduate and doctoral students in employment, proportion of staff with higher education, proportion of workers advanced training or trained, quality and innovation of educational programs, proportion of workers that are engaged in innovative work, proportion of staff employed in research and development by total employment in the economy, share of spending on training in the cost structure, share of employment in hi-tech industries, share of employment in professional and social services);
- *institutional* (a legislative framework to support innovation employment, the number of programs and concepts that contribute to the development of innovative employment and the availability of new technologies institutional structures in the labor market, innovative organizational culture, recruitment for new technologies);
- *social* (focus on innovative labor practices and motivation, focus on education, training and labor mobility, commitment to highly intensive work, ability to implement innovative potential in the workplace).

Within the definition of innovative types and forms of employment Ukraine should be considered not only quantitative parameters of employment of innovation, but also its quality characteristics. To identify innovative employment quality parameters a method of peer review can be used (poll workers, employers, government officials) that will further formalize and make the process convenient for data collection and analysis.

Stage VI. Analysis of the current situation in the labor market and forecasting its development in the short and long term for the timely identification of innovative types and forms of employment.

In last decade there are constant changes in the structure of employment by economic activity, the most significant of which is the exceed the share of employment in the service sector over the share of employment in the agricultural sector due to the movement of the source values and wealth from the sphere of material production to the production of intangible knowledge. Therefore, for early detection of innovative types and forms of employment the analysis of the labor market and forecasting of its development in the short and long term is necessary.

Stage VII. Providing conditions for the development of innovative employment.

Prerequisites for promoting the development of innovative employment should be:

- improving the legal framework that regulates and promotes relationships between entities and the state;
- providing high quality labor resources formation, improving their professional skills, experience, ensuring a high level of innovation, mobility and adaptability of workers;
- improving scientific and technological level and innovativeness of the economy;

- developing innovative, flexible forms of employment, which is a reserve increased employment;
- increasing labor market flexibility and production expansion of the service sector;
- increasing the share of high-tech industries, growth of the service sector;
- creating economic opportunities for the population through the development and implementation of economic policies aimed at developing new innovative and preservation of existing jobs;
- stimulating creativity, activity and initiative of workers to ensure formation of the necessary skills and competencies;
- the spread of new technology, new raw materials and new products;
- increasing public funding in science and education.

Stage VIII. Monitoring changes in forms and types of employment with a view to timely identification and support from the state and business

Innovative employment contributes to the high level of economic development, improving the competitiveness of the national economy, providing quality of life of the population receiving work income greater than the minimum required for the reproduction of resources of labor, improving working conditions, providing professional growth, improving enterprise competitiveness, job retention and creation new workplaces.

Innovative employment determines needs of the economy for skilled workers and the needs of the workforce in jobs with appropriate working conditions, providing a balance of supply and demand in the labor market. The state should build appropriate employment policies, given the principle of consistency of economic development, which includes the coordination of social and economic policy with employment policy at all levels.

Monitoring of employers requirements for candidates for vacant positions and related improving of the content of the education system. Optimal in this situation could be the creation of the “bank of competences” with employers and professionals in the field of education; key task of the “bank” is collection and update by interviewing managers of different industries, information on the competencies, knowledge and skills needed for workers of different professions. The existence of the mentioned “bank” will create and adjust the curriculum according to the current needs of employers and maximize the quality and efficiency of the education system.

Monitoring and forecasting of the staffing provision for the economy presupposes:

1. Ensuring complete and accurate records of employees in enterprises with professional groups according to the classifier of professions. It requires:

- providing organizational and methodological assistance to enterprises in the organization of accounting personnel according to the classifier professions;

- implementing business system of statistical frames based on the current classifier professions;
 - ensuring regular publication of statistics on the vocational qualification structure of the labor force in statistics books and media;
 - preparing annual policy papers on the dynamics, trends and employment issues in the context of professional-qualification structure.
2. Creating a system of monitoring economy needs in staffing, requiring:
- developing methods of monitoring the overall economy and additional needs for personnel in the context of international economic activity and professional qualification structure;
 - ongoing monitoring of professional qualification structure of employees, and more general needs of the workforce in accordance with the modern classification of professions highlighting the main occupations by industry and ensuring the availability of information for schools and the public;
 - introduction of a mechanism of regular forecasting of general and specific needs of the economy in terms of foreign trade activities according to the professional-qualification structure.

Thus, the current components of the state policy related to the development of innovative employment should be: stimulating entrepreneurship; providing financial support to enterprises that carry out a policy of creating new innovative jobs; supporting domestic and foreign investment aimed at providing innovative labor; providing regulatory support to SMEs; promoting self-employment [5, p. 79].

CONCLUSIONS

The current state of the employment system is characterized by reduced levels of employment and economic activity, sustainable productivity growth in the absence of significant fluctuations, decline in employment in the agricultural sector of the global economy and increased employment in the service sector. Under these conditions, the actual spread is innovative types and forms of employment, facilitate formation of a new level of economic development, providing additional competitive advantages for employers and improving the quality of work life for employees. Realization of the proposed methodology for development of innovative types and forms of employment in Ukraine will improve the legal framework for the regulation of labor relations for new forms of employment and form an effective forecasting system of national demand in labor in response to changes in the structure of employment.

REFERENCES

1. Korchun, M. (2008) Shlyakhy pidvyshchennya ekonomichnoyi aktyvnosti ta zaynyatosti molodi na rynku pratsi, Ukrayina: aspekty pratsi, vol. 1, pp. 35-39.
2. Dolishniy, M. I., Sadova, U. Ya. and Semiv, L. K. (2000) Rehional'ni rynky pratsi: analiz ta prohnoz [Regional Labor Markets: Analysis and Forecast], In-t rehion. doslidzh., L'viv, Ukraine.
3. Yakymova, N. S. (2014) Zabezpechennya produktyvnoyi zaynyatosti cherez rehulyuvannya profesiyno-osvitnikh trayektoriy molodi: dysertatsiya na zdobuttya naukovooho stup. kand. ekon. nauk (08.00.07), Donets'kyy natsional'nyy univertsytet, Donets'k, Ukraine.
4. Sankova, L.V. (2008) Zanyatost' ynnovatsyonnoho typu: teoriya, metodolohyya yssledovannya, upravlenye: avtoreferat dysertatsyy na soyskanye uchenoy stepeny doktora ekonomycheskykh nauk (08.00.05), Saratovskyy hosudarstvennyy tekhnicheskyy unyversytet, Moskva, Russian Federation.
5. Tarshyna, O. S. (2006) Derzhavna polityka zaynyatosti naseleennya, Ekonomika ta derzhava, vol. 1, pp.77-80.