

Method of Integrated Assessment of the Effectiveness of Regional Labour Market Infrastructure

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***Abstract---** The research is dedicated to the development of the integrated assessment method using specific indicators that characterize the effectiveness of the development of components of the regional labour market infrastructure and scientific and practical substantiates the possibility of assessing the dynamic efficiency of infrastructure development and determining the share of changes in its particular components.*

***Keywords---** Labour Market Infrastructure, Unemployment, Employment Services, Efficiency Indicators, Integrated Assessment, Labour Supply and Demand.*

I. INTRODUCTION

Level of employment corresponds to the equilibrium of the economic system. The level of employment characterizes the degree of use of the able-bodied population in the field of socially useful labour. The value of this indicator reflects the current economic situation in the country. Moreover, depending on the ratio of supply and demand for labour, unemployment or a shortage of labour may be observed. Currently, developing countries face problems of ensuring the employment of the able-bodied population in the labour market, ensuring the consistency of the number of unemployed and vacant jobs, creating comprehensively effective employment programs, increasing the mobility and competitiveness of the unemployed, as well as developing a system of psychological support for them, and training personnel for the system employment promotion, improving the methodology for assessing the effectiveness of the development of composite structures of the labour market infrastructure, development of state and non-state employment services. An effective solution to the above-mentioned problems requires the development of scientifically based proposals and recommendations the labour market infrastructure and. At the same time, Employment Services with its main clients will be built in such a way that employers - following the situation on the labour market, develop a desire to take care of future labour requirements, take proactive measures to train the necessary staff; and for the unemployed - to develop an internal need for professional growth and psychological readiness for competition in the labour market.

II. LITERATURE REVIEW

Level of development of infrastructure of labour market, the socio-economic significance of the labour market infrastructure, components, tasks and functions, activities of state and non-state employment agencies, legal, organizational and social development of the labour market, mechanisms of economic regulation, the main

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directions, goals and objectives of state policy in the field of employment, public employment methods and indicators for assessing the effectiveness of the policy, the mechanism of employment and job incentives, measures are taken by the state to promote effective employment had been studied by Armstrong M.A. [1], Beysenov S, Mukhambetov T. [3], Varfolomeeva O.A. [4], Rudneva L.N. [8], Abdurakhmanov K.Kh, Odegov Yu.G. [9], Wright P. M., Gardner T. M. and Moynihan L. M. [12]. Also, the necessity of using the components and elements of the labour market infrastructure at different levels in the field of economics and management, as well as the classification of indicators for the evaluation of the effectiveness of public employment services and the use of optimal methods to assess the effectiveness of employment services studied by Arthur J.V. [2], Varfolomeeva O.A. [4], Kolesnikova O. [5], Lawler E., Boudreau J. [6], Smirnov S. [10].

III. RESEARCH METHODOLOGY

In this research, we used a dialectical and systematic approach to the study of economic systems and ratios to determine the components of the labour market infrastructure and their interrelation, complex assessment, comparative analysis, statistical and dynamic approaches and grouping methods and optimal methods of evaluation of the effectiveness of employment services based on the need.

IV. ANALYSIS AND RESULTS

Development of market relations implies the development of social and labour relations. And it requires the formation of a labour market and its effective development. For these purposes, it is necessary to effectively apply the objective laws of the development of socio-economic relations. Undoubtedly, the development of these relations is impossible without the existing organizational and economic base. These fundamentals of the implementation of labour relations are determined, first of all, by the degree of infrastructure development, the positive influence of infrastructure on the stable development of labour relations, and the creation of conditions for the exercise of rights and guarantees in the field of labour. Therefore, for the full functioning of the labour market, it is necessary to develop its infrastructure. The infrastructure should regulate the relationship between the employer and the employee regarding the price of labour, working conditions, training and retraining of employees, as well as the protection of the rights of employers and employees in the labour market. At present, ensuring employment is one of the main problems facing society, labour market infrastructure is the main means of regulating the relations between labour market entities and the implementation of the basic principles of the state policy of promoting employment [9].

The effectiveness of the functioning of the regional labour market infrastructure is determined by the activities of the constituent subsystems, each of which contributes to its result. The indicators of economic and social efficiency, providing a generalized assessment of the functioning of the regional infrastructure of the labour market, do not allow us to characterize the return of its components, to identify strong and weak links in it and, based on this, outline promising areas of development. For this purpose, we propose a methodology for a comprehensive assessment of the effectiveness of the functioning of a regional labour market infrastructure, which is based on economic analysis methods, expert opinions, and classification theory. Using this technique involves the steps mentioned in table 1.

Table 1: Stages of Integrated Performance Assessment Development of Labour Market Infrastructure

1.	Determining the list of indicators of the effectiveness of labour market infrastructure subsystems that affect the results of the functioning of the labour market infrastructure in general
2.	Calculation of changes in the actual value of each particular indicator in comparison with its base value
3.	Choosing a mathematical incentive function that reflects the desired direction of change in particular indicators
4.	Introduction of weight coefficients that characterize the relative importance of particular indicators
5.	Calculation of an integral indicator of the effectiveness of the labour market infrastructure

To determine the set of private indicators of the effectiveness of the functioning of the labour market infrastructure subsystems, we analyzed studies on this problem, which showed that the main object of assessment is the labour mediation subsystem, while the rest of the labour market infrastructure subsystems were not adequately reflected. To assess the effectiveness of the structural parts of the labour market infrastructure, a set of private indicators is needed (labour mediation, career guidance and training, socio-psychological support and finance). The basis for the selection of these indicators is an expert assessment of the share of each structural part while ensuring the fulfilment of their target functions (table 2).

Table 2: The System of Integrated Indicators for Assessing the Effectiveness of the Development of Labour Market Infrastructure

Performance indicators for the development of structural parts of the labour market infrastructure	
I. The system of mediation in labour relations	
1.	Number of citizens looking for job, persons;
2.	The share of employed with the assistance of the employment service of the total number of applicants, %;
3.	The share of those employed with the assistance of the employment service from the total number of people employed, %;
4.	Comparative value of the duration of unemployment, %;
5.	The average duration of unemployment, month;
6.	The number of new jobs per registered unemployed.
II. The system of vocational guidance and preparation for the profession	
1.	The share of persons who received professional orientation services from the total number of people who applied to the employment services, %;
2.	Percentage of employed out of the total number of graduates of vocational training organized by employment services, %;
3.	The share of citizens who provide services to promote self-employment from the total number of people who applied to the employment services for employment, %.
III. Social support system	
1.	The proportion of people who received financial assistance, out of the total number of unemployed, %;
2.	The proportion of citizens who participated in social adaptation activities, out of the total number of registered unemployed, %;
3.	The number of employed adolescents, people;
4.	The proportion of citizens who participated in public works, out of the total number who applied to employment services on employment issues,%;
5.	The number of employed citizens in need of social protection.
IV. Financial system	
1.	The share of expenditures for the active policy of the employment promotion program in the total costs of public employment services,%;
2.	Expenditures for vocational education per one officially registered unemployed person;
3.	Expenditures for professionally oriented persons for one unemployed from among the economically active population;
4.	Expenditures for state employment services for social support of unemployed citizens per one unemployed person;
5.	Expenditures for organizing public works, coming per person involved in public works, sum.

The values of indicators characterizing the effectiveness of the functioning of individual subsystems of the labour market infrastructure are determined based on official and internal reporting by employment services. For each indicator, the change in its actual value is calculated in comparison with the base value:

$$X_i = \frac{P_i^f}{P_i^b} \times 100, \quad (1)$$

where X_i – change in the value of the “i” indicator in the reporting period compared with the base, %;

P_i^f – value of the “i” indicator in the reporting period;

P_i^b – the value of the “i” indicator in the base period;

The obtained numerical value (X_i) characterizes the degree of change in a particular indicator but does not reflect the direction of this change.

To take into account the latter, it is proposed to determine the adjusted values of particular indicators based on the introduction of the function of stimulating their changes in the desired direction:

$$Y_i = f(X_i), \quad (2)$$

where Y_i , – value of the adjusted “i” indicator, %;

$f(X_i)$ – the mathematical function of stimulating changes in the “i” indicator in the desired direction.

In this case, it is proposed to use two stimulation functions [8]:

- a) Stimulation on the "linear upward" ($Y = X$), when encouraged to increase the indicator. This function is applicable for such indicators as the share of those employed with the assistance of employment services in the number of people employed in sectors of the economy; the number of vacancies per registered unemployed, etc.
- b) Stimulation according to the “linear descending” ($Y = 200-X$), when it is desirable to reduce the magnitude of the private indicator (the proportion of long-term unemployed, the average duration of unemployment).

To measure particular indicators of the effectiveness of functioning of labour market infrastructure subsystems, we introduce weight coefficients (B_i) that characterize the relative importance of each indicator in their entirety and proportionally affect their value. Weighting factors are determined by experts based on ranking indicators and assigning them specific weights in fractions of a unit. Moreover, in our opinion, the sum of the weighting coefficients of indicators characterizing the efficiency of the functioning of the subsystem of labour mediation, in more reflecting the results of the functioning of the labour market infrastructure, should be close to 0.5 [8].

Based on the foregoing, particular indicators of the effectiveness of the functioning of the labour market infrastructure subsystems for the purpose of their comprehensive assessment are calculated using the formula:

$$P_i^k = Y_i \times B_i, \quad (3)$$

where P_i^k – the value of the “i” particular indicator calculated for a comprehensive assessment, points;

B_i – weight coefficient of “i” private indicator.

A comprehensive indicator of the effectiveness of the functioning of the labour market infrastructure (P^k) is determined by the sum of the values P_i^k :

$$P^k = \sum_{i=1}^n P_i^k, \quad (4)$$

where: n – number particular indicators.

Evaluation of the effectiveness of the functioning of the infrastructure of the regional labour market depends on the numerical value of the complex indicator: if the value of P^k is less than 95 points, efficiency is considered as low; if the value of P^k is in the range from 100 to 105 points, the efficiency is considered relatively high; if the P^k value exceeds 105 points, the efficiency is considered high.

The practical significance of this indicator is the ability to assess the dynamic effectiveness of the development of labour market infrastructure and identify changes that have occurred in its individual structural parts.

According to the results of an integrated assessment carried out to determine the impact of individual systems of structural parts of the labour market infrastructure on the effectiveness of its development in the Republic of Uzbekistan, as well as directions for improving its development, the efficiency indicator of infrastructure in 2017 was 100.2, and in 2019 103.9, which indicates that the efficiency according to the values of P^k is considered relatively high (Table 3). Over the study period, the effectiveness of the development of the labour market infrastructure in our country in all its structural parts in general tends to increase.

Table 3: The Influence of Individual Subsystems on the Effectiveness of the Development of Labour Market Infrastructure in the Republic of Uzbekistan

<i>Systems</i>	<i>Efficiency</i>		
	<i>2017</i>	<i>2019</i>	<i>Change (+) growth, (-) decrease</i>
System of mediation in labour	46,9	45,8	-1,1
The system of professional orientation and preparation for the profession	12,9	14,6	+1,7
Social support system	13,6	13,5	-0,1
Financial system	26,8	30,0	+3,2
Infrastructure	100,2	103,9	+3,7

In assessing the effectiveness of the components of the development of labour market infrastructure, statistics on the activities of the state employment service in 2015 were obtained as the base year.

The dynamics of specific indicators of the system of mediation in labour reflects the positive trend in the share of those who applied to the Employment Assistance Centers (growth by 4.3% in 2015-2019), the share of those employed by the employment service in the number of employees in the economy (4.0% growth in 2015-2019). The share of long-term unemployed in the country decreased from 9.5% in 2015 to 9.2% in 2019, and the average duration of unemployment decreased from 4.9 months to 4.6 months. As a result, the number of vacancies per each registered unemployed decreased by 8.0%.

Among the particular indicators of the vocational orientation and vocational training system, the contribution of individuals who received vocational orientation services from citizens who applied to the employment service on the issue of employment decreased by 25% within the analyzed years. The share of employed graduates of vocational training organized by the employment service within the period increased by 1.6%, and the share of citizens who applied to the employment service for self-employment increased by 13.3%.

The share of persons receiving financial assistance from the total unemployed in the country under the system of social and psychological support in 2015-2019 was 1.6%, the share of registered unemployed who participated in social adaptation measures was 11.4%, the number of employed youth was 13.4%, the number of people in need of social protection increased by 7.6%. The analysis shows that the number of citizens who applied to the employment service for employment in public work in 2019 compared to 2015 was 16.1%.

All measures in the direction of the financial system have an upward trend in comparative analysis over the period under review. For example, in 2015-2019, the share of active employment programs in the total expenditures of the state employment service in the country was 8.4%, the expenditures for vocational training for each officially registered unemployed will be 53.0%, per unemployed person. Expenditures of the state employment service on social support of incoming unemployed increased by 57.5%.

The efficiency of the development of the labour market infrastructure tends to grow overall in all its components during the study period in the Republic of Uzbekistan.

V. CONCLUSION

Assessing the effectiveness of the development of labour market infrastructure will allow to develop methodological and practical measures to address the challenges of changes in its structure.

Development and implementation of a comprehensive system of evaluation of the effectiveness of the State Employment Service in various areas on the basis of individual indicators, allows to draw clear conclusions in the assessment of its economic activity. Accordingly, to assess the effectiveness of the infrastructure of the regional labour market, we proposed a method for the use of an integrated system of indicators that represents the social and economic efficiency of its development.

As a result of the introduction of this method into practice, it is possible to assess the effectiveness of the dynamics of the development of the activities of the regional employment agencies and also to determine the percentage of changes in individual components.

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