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Statistical Assessment Of Unemployment And Its Causes In Tashkent Region

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Abstract: Today in our Republic, the development of the labor market and its regulation, taking into account the needs of the modern labor market, requires the development of the most effective system for training highly qualified personnel and training everyone. round competitive specialists. In addition, determining the place of young specialists in production and increasing their competitiveness with specialists from foreign countries is one of the most important issues today. Based on the above objectives, as a result of creating new jobs and supporting the orientation of young people towards entrepreneurship, consistent systematic work is being carried out to achieve the well-being of the population, especially those in need of social protection.
Key words: economically active population, number of jobs in the economy, labor resources, labor market, employment, unemployment rate, distribution of labor resources, green jobs.

Introduction

All changes and processes taking place in the labor market are directly or indirectly related to the state of the regional economy. In turn, assessing the current needs of the region for personnel allows you to get an idea of the state of the labor market as a result of various processes taking place in the region. This assessment allows you to assess the consequences of the activities carried out by economic entities that directly or indirectly affect the state of the labor market and the economy as a whole.

The Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 on the new Development Strategy of Uzbekistan for 2022-2026, based on a thorough analysis of the complex processes at the global level and the results of the development achieved by our country, in recent years, based on the principle of "For the sake of human dignity", a number of tasks have been implemented to further increase the well-being of our people, transform economic sectors and rapidly develop entrepreneurship, unconditionally ensure human rights and interests, and form an active civil society, ensure the well-being of the population, standard of living, effective employment of the population, introduce a system of legal benefits for self-employed persons, gradually transition the economy to a green economy, reform the activities of digital technology centers, and develop small business and private entrepreneurship.

We can note that significant work is also being carried out in this regard in the Tashkent region. As of April 1, 2023, the permanent population of Tashkent region increased by 0.5% or 13.5 thousand people compared to the beginning of the year and amounted to 3007.0 thousand people. Including, the urban population is 1504.6 thousand people, which is 50.04% of the total population, the rural population is 1502.4 thousand people, which is 49.96% of the total population. Of the permanent population of the region, 13.3% or 399.9 thousand people are older than working age, 902.3 thousand people or 30.0% are younger than working age, and 56.7% or 1704.8 thousand people are of working age (Figure 1).

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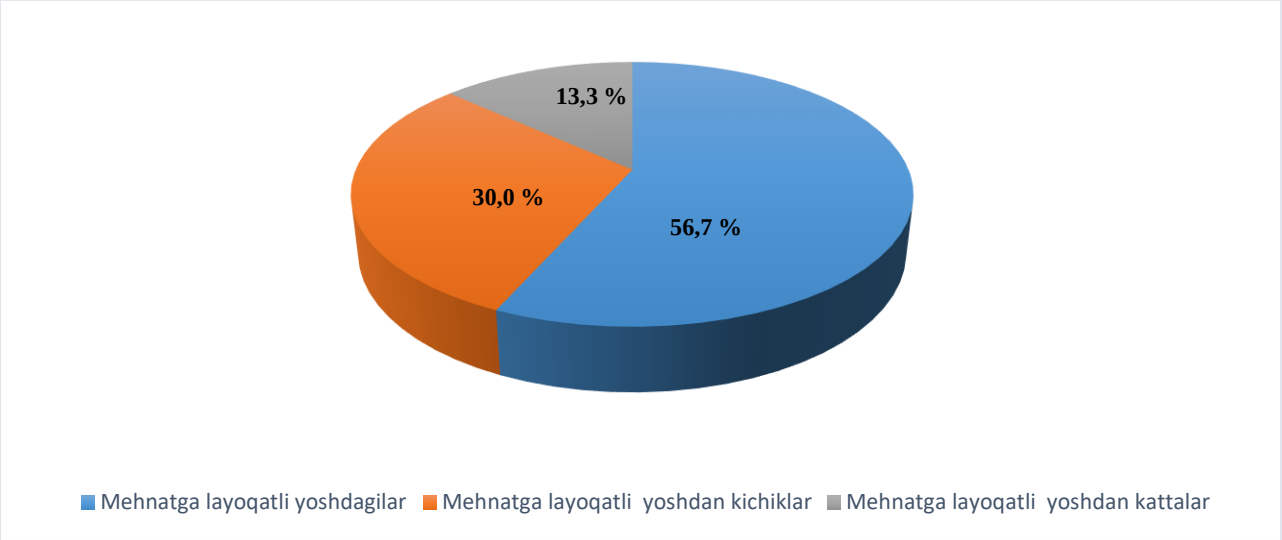
Figure 1.

Distribution of the population of Tashkent region by age groups[1]



The above indicators certainly have an impact on the labor market of the Tashkent region. As a result of our research on the number of jobs in the economy and the unemployment rate, which are considered to be the main indicators of the labor market and its efficiency, we can note that the unemployment rate and its control are important factors for the development of the labor market.

Literature review

Local researchers Sh.R. Kholmuminov and N.U. Arabov scientifically and theoretically analyzed the interconnectedness of the labor market infrastructure and its components, developed a comprehensive assessment and perspective methodology for the effectiveness of its development, as well as the formation and identified the main directions of development. Also, a strategic concept was developed to improve the organizational and economic mechanism of labor market regulation and increase the efficiency of labor market infrastructure development.

A.E. Kotlyar took a rather narrow approach to coordinating the economic interests of labor market entities. This approach limits the labor market to able-bodied individuals who are free from work, such people are unemployed at certain times, are absent from study or work, and are looking for another job or are entering labor activity for the first time. Representatives of such a theory limit the labor market to the process of agreement on the exchange of a person's ability to work, and argue that the use of this ability occurs outside the labor market, in the labor process.

Russian economist V.A. Pavlenkov and domestic economist Q.Kh. Abdurakhmonov consider it acceptable to interpret the economic interests of labor market entities in an expanded manner.

Research methodology

The article used scientific observation, a systematic approach, and research methods such as induction and deduction. Based on the analysis of existing methods and approaches in the world, a proposal was developed on the unemployment rate, which represents the efficiency of the Tashkent region's labor market, and on the problems and solutions for reducing it.

Analysis and results

For the econometric assessment of changes and development of the labor market of the Tashkent region, the following factors were selected: the unemployment rate in the region - the

[1] Kholmuminov Sh.R., Arabov N.U. Alcohol market infrastructure. Textbook.-T.: "Science and Technologies", 2016. 150-155 p.

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number of enterprises affecting Y - X3, real income per capita - X4, average nominal monthly salary - X5, and the gross regional product per capita of the employed population in the economy - X6. First, we determine the degree of correlation between these factors (Table 1).

Table 1

Correlation coefficient between factors affecting changes in labor market efficiency in Tashkent region

	Y	X_3	X_4	X_5	X_6
Y	1				
X_3	0,928982	1			
X_4	0,891295	0,687302	1		
X_5	0,908534	0,584386	0,773596	1	
X_6	0,878841	0,660722	0,743851	0,679389	1

If we pay attention to the table values, the factors of the number of enterprises in the region -X3 (rY,X3=0.928982), real income per capita -X4 (rY,X4=0.891295), average nominal monthly wage -X5 (rY,X5=0.908534) and gross regional product per capita of the employed population in the economy -X6 (rY,X6=0.878841) are strongly correlated with the unemployment rate in the region, and since there is no multicollinearity between the factors according to the condition rx1,x2<0.8, we can continue the process.

First of all, since the selected factors have different units of measurement, a nonlinear equation is formed by logarithmizing the factor indicators and checking it based on qualitative criteria. According to him, the determination of the regression equation between the observed relationship can be continued using the eviews program (Table 2)

Table 2

Results of the regression equation between factors affecting changes in labor market efficiency in Tashkent region

Dependent Variable: LNY

Method: Least Squares

Date: 11/25/22 Time: 00:05

Sample: 2000 2021

Included observations: 22

Variable	Coefficient	Std. Yerror	t-Statistic	Prob.
LNX3	-1.166770	0.990427	-1.178047	0.0542
LNX4	-0.498439	0.151994	-3.279330	0.0044
LNX5	2.067970	0.672634	3.0744357	0.0025
LNX6	-0.437632	1.018315	-0.429761	0.0313
C	0.117084	5.223590	0.243288	0.0107
			t_{jad}=2,109815578	
R-squared	0.733180	Mean dependent var		1.873683
Adjusted R-squared	0.670398	S.D. dependent var		0.501829
S.E. of regression	0.288105	Akaike info criterion		0.545732
Sum squared resid	1.411076	Schwarz criterion		0.793697
Log likelihood	-1.003056	Hannan-Quinn criter.		0.604145

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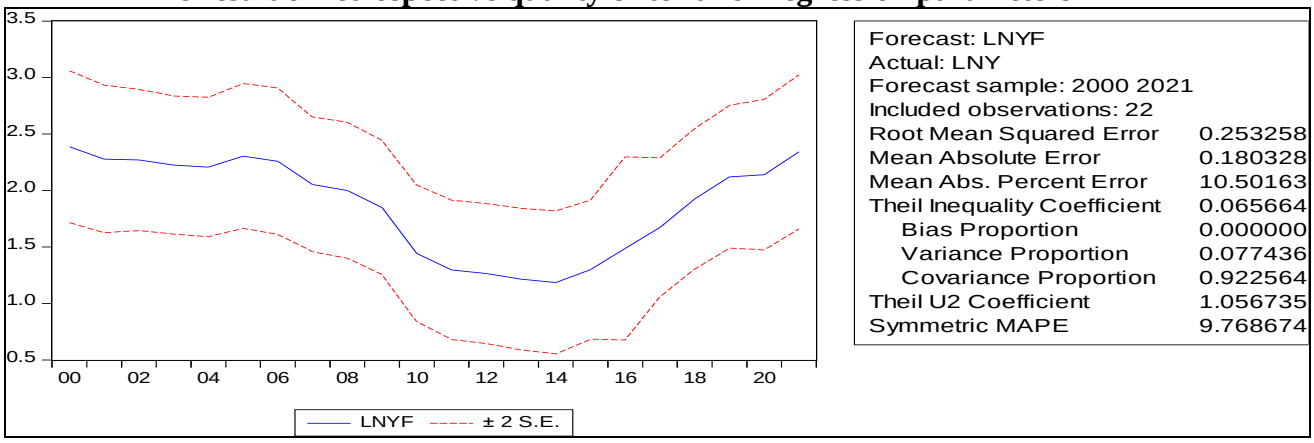
F-statistic	11.67831	Durbin-Watson stat	1.878652
Prob(F-statistic)	0.000096	F_{jad}=0,33730133	

Based on the calculation results, the following equation is derived based on the coefficient values presented in the table:

LnY=-1.17LnX3-0.5LnX4+2.068LnX5-0.44LnX6+0.12 (1)

If we pay attention to the significance of the parameters of the identified regression equation 1 according to the t-Statistic criteria, with α=0.05 and df=17, it can be seen that the parameters of real income per capita-X4(tX4=|-3.279|>tJad=2.1098) and average nominal monthly salary-X5 (tX5=3.0744357>tJad=2.1098) are significant, and it is necessary to check the significance of the remaining parameters with the retrospective quality criteria MAPE and TIC (Figure 2).

Figure 2.
The result of retrospective quality criteria for regression parameters



Based on the data presented in Figure 2, it can be noted that MAPE=10.5, which in turn means that MAPE=10.5<20% forecast accuracy is high and TIC=0.07<1 coefficient tends to zero, which means that all parameters of the regression equation are significant. In order to follow the rules of logarithm and to facilitate the calculation processes and achieve accuracy of the results, the regression equation obtained above is exponentiated and the following equation is obtained according to it: Y=(〖X5〗 ^2.068*e^0.12)/(〖X3〗 ^1.17* 〖X4〗 ^0.5* 〖X6〗 ^0.44) (1*) The resulting 1*-regression equation is truly significant with α=0.05 and k1=17; Considering that FJad=0.33730 when k2=4, the Fisher value Fhis=11.68, calculated under the condition FJad<Fhis, indicates the significance of the 1*-regression equation and the absence of autocorrelation, since DW=1.88, indicates the reliability and adequacy of the equation.

If we give an economic explanation to the identified 1*-regression equation, it was found that if the number of enterprises, real income per capita and average nominal monthly salary were increased by 1.0 percent, the unemployment rate in the Tashkent region could be further reduced by 0.1 percent, 0.02 percent and 0.01 percent, respectively. It follows from this that the first issue in the region is to establish new production facilities.

A high unemployment rate negatively affects the effective functioning of the regional labor market. In this sense, we also conducted a multifactor econometric analysis of the unemployment rate. Using the above-defined Y=(〖X5〗 ^2.068*e^0.12)/(〖X3〗 ^1.17* 〖X4〗 ^0.5* 〖X6〗 ^0.44) (1*)-regression equation, the remaining factors are determined by the following equations for time (t=24):

Number of enterprises – X3=2784.8+2159.6*t; Real income per capita X4=-1086.8+717.1*t; Average nominal monthly salary -X5=26.4+119.8*t; GRP per capita

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employed in the economy – X6=-3559.4+3217.2*t. The results of the multifactor forecast of the change in the unemployment rate of the Tashkent region are determined using the following equations (Table 4).

Table 4

Results of multifactorial forecast of changes in the unemployment rate of Tashkent region

Years	Unemployment rate, %	Number of enterprises, in units	Real income per capita, thousand soums	Average monthly nominal calculated salary, thousand soums	GRP per capita of employed population, thousand soums
2023	8,2	54615	16123,6	2901,6	73653,4
2024	7,9	56775	16840,7	3021,4	76870,6
2025	7,6	58934	17557,8	3141,2	80087,8
2026	7,3	61094	18274,9	3261	83305
2027	7,0	63254	18992	3380,8	86522,2

If we pay attention to the results of the multifactorial forecast of changes in the unemployment rate in the Tashkent region presented in the table, first of all, scientific research has confirmed that the unemployment rate, not only in the regions, but also in developed countries, can be reduced, if not completely eliminated. In our study, unemployment as a result factor is directly determined by determining its importance in the labor market, which in turn is expected to decrease by 1.5% in the region by 2028 compared to 2023, which in turn will be observed in the number of enterprises in the Tashkent region by 13.7% compared to 2023, real income per capita by 15.7%, and gross regional product per employed person in the region by 14.9%, respectively, when the number of enterprises reaches 63,254, real income per capita reaches 18,992.0 thousand soums, and gross regional product per employed person reaches 86,522.2 thousand soums.

Conclusion and results

In conclusion, the labor market of the Tashkent region is characterized by a significant level of unemployment, hidden unemployment, which is the result of many unresolved problems and contradictions during the long-term complication of the socio-economic situation. In general, the modern model of the Tashkent region's labor market is characterized by the following shortcomings:

- the rigidity of the employment sector, resulting from excessive regulation of labor relations;
- the inconsistency of employment policy and state regulation of labor remuneration with economic, social, financial, sectoral, territorial, investment, credit policies;
- the lack of an active approach to regulating the employment sector, which is often manifested in the failure to respond in a timely manner to already formed problems and existing threats, and the failure to take appropriate measures to prevent them;

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- the mismatch of the labor market with the educational services market, which leads to an increase in the quantitative and professional-qualification imbalance between supply and demand for labor and the aggravation of the problem of youth unemployment;

- low use of economic mechanisms that contribute to the creation of new quality jobs and the attraction of young people and highly qualified labor;

- the focus of state policy on supporting the dependent relationships of the unemployed in the absence of effective incentives to ensure effective employment;

- the imperfection of labor legislation, which consists in the low effectiveness of specialized state programs, the obsolescence and inconsistency of regulatory and legal documents, the insufficient adaptation of their provisions to international standards, and the absence of an effective mechanism for ensuring compliance with legislation in the field of labor relations.

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