



STATISTICAL ANALYSIS OF GREEN ECONOMY AND LABOR MARKET RELATIONS

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Received: 28 th February 2026		This article analyzes the transformation of the labor market in the context of the development of the green economy and its impact on the level of employment. The study argues that the ecological modernization of economic sectors based on the principles of sustainable development, the use of renewable energy sources, and the introduction of resource-saving technologies will lead to the formation of new jobs in the labor market. In addition, the dynamics of pollutants emitted into the atmosphere and the expansion of protected natural areas in Uzbekistan are analyzed based on statistical data. According to the results of the study, the development of the green economy is of great importance in modernizing the labor market, increasing employment, and ensuring environmental sustainability.
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INTRODUCTION.

Today, the principles of sustainable development are gaining increasing importance in the world economy. The concept of development, combining tasks such as environmental protection, efficient use of natural resources and ensuring economic growth, became the basis for the formation of the concept of a green economy. The green economy is considered a new economic model aimed at ensuring the environmental safety of economic activity, saving energy and resources, and increasing human well-being. In this regard, this concept not only ensures environmental sustainability, but also has a significant impact on the development of the labor market by modernizing economic sectors and creating new jobs.

In recent years, such areas as renewable energy sources, energy efficiency, ecological construction, waste processing and the introduction of "green technologies" have been rapidly developing worldwide. This is shaping the demand for new professions and specialties in the labor market and leading to the emergence of "green jobs". Therefore, the study of the relationship between the green economy and the labor market is of both theoretical and practical importance. Uzbekistan is also implementing reforms aimed at environmentally sustainable development of the economy, rational use of natural resources, and the widespread introduction of renewable energy sources. The country has adopted state programs and strategic documents aimed at developing the principles of the "green economy", and special attention is paid to the modernization of economic sectors, ensuring

environmental sustainability, and increasing employment. This process serves to create new opportunities in the labor market, increase the demand for specialists with environmental knowledge and skills. From this point of view, the purpose of this study is to analyze the relationship between the green economy and the labor market based on statistical data, assess the economic and social significance of this process, and justify the directions for its further development.

In addition, the Resolution of the President of the Republic of Uzbekistan No. PP-447 dated December 12, 2022 "On measures to increase the level of transition to a "green" economy and ensure "green" growth in the Republic of Uzbekistan until 2030" also sets out a number of tasks to be implemented in order to stimulate the creation of "green jobs" in sectors of the economy, retrain personnel, and train new specialists in the field of renewable energy. The Resolution of the President of the Republic of Uzbekistan No. PP-156 dated May 31, 2023 "On additional measures to introduce "green economy" technologies and stimulate energy-saving systems" also shows that research on this topic has not lost its relevance, as shown by the measures aimed at increasing labor productivity through the use of environmentally friendly technologies in industry and forming a demand for qualified specialists in this field.

LITERATURE REVIEW

The issues of the interrelationship between the green economy and the labor market have been widely studied by international and national economists. These studies provide scientific justification for the interaction



of environmental factors and labor resources in ensuring sustainable economic development.

First, the theoretical foundations of the concept of sustainable development were put forward in the report "Our Common Future", prepared under the leadership of Gro Harlem Brundtland. It emphasized that economic growth, social well-being and environmental protection are an interconnected system. According to the scientist, sustainable development requires the rational use of natural resources, taking into account the interests of future generations[1].

David Author (MIT, USA): One of the world's leading experts on the labor market. According to his theory of the "Task-based approach", the green transformation will not lead to the complete disappearance of jobs in the labor market, but to a change in their content. Fact: As a result of technological change, jobs in traditional sectors may decrease, but the demand for highly skilled "green" workers will increase dramatically[2].

Nicholas Stern (London School of Economics): A renowned researcher on the economics of climate change. He believes that the transition to low-carbon growth is a "new industrial revolution" that will create innovative growth and new markets. Fact: Investment in the green economy is a key driver of long-term economic stability and job creation[3].

The economist Edward Barbier made a significant contribution to the development of the theory of the green economy. His research substantiates the fact that the development of a green economy can ensure economic growth, reduce poverty and create new jobs. According to the scientist, investments in energy efficiency and renewable energy sources will help create new "green jobs" in the labor market[4].

Nicholas Stern, who also conducted research in the field of ecological economics, emphasized that climate change will have a serious impact on the economy. In his opinion, by strengthening climate policy and introducing green technologies, it is possible to create new opportunities in the labor market simultaneously with economic growth[5].

Bakhodir Umurzakov (PhD, Professor): Conducts research on labor economics and human capital. His school conducts statistical analysis of issues of integration of labor resources and professional development in the context of a green economy[6].

Mirolimov Mirislom (researcher at the TDIU): Statistically studied changes in the labor market of Uzbekistan in the transition to a green economy. According to the scientist, new professions and crafts (green skills) in a green economy require a qualitative renewal of the labor market[7].

Gulrukh Vafoyeva: Studies the introduction of green mechanisms in Uzbekistan and its impact on economic sectors. She analyzed the role of the republic's legislative framework in supporting a green economy[8].

The analysis of the above-mentioned scientific sources and studies shows that the interrelationship between the green economy and the labor market is one of the important directions of economic research today. The analyzed studies of scientists and international organizations substantiate the possibilities of ensuring environmental sustainability, efficient use of resources and creating new jobs by introducing the principles of sustainable development into economic sectors. In particular, the concept of sustainable development is aimed at ensuring the interrelationship between economic growth, social well-being and environmental protection, and this approach was the basis for the formation of the idea of a green economy. Also, a number of studies have emphasized that the development of renewable energy sources, energy efficiency, environmental technologies and waste processing will contribute to the emergence of new professions and "green jobs" in the labor market. In general, the results of the literature review show that the development of a green economy is an important factor in modernizing the labor market, creating new jobs and ensuring sustainable economic development. Therefore, an in-depth analysis of this topic based on statistical data and an assessment of its practical importance in the national economy is one of the important scientific tasks.

RESEARCH METHODOLOGY

This study analyzed the relationship between the green economy and the labor market based on statistical data. The sources of data were materials from the National Statistics Committee of Uzbekistan and international organizations (UNDP, World Bank).

The study used methods of dynamic and comparative analysis, graphical and tabular visualization, and calculating growth and decline in percentages. Also, general trends and differences in the cross-section of regions were identified using abstract-logical analysis, induction and deduction methods. As a result, this methodology allows us to identify the relationship between the green economy and the labor market, assess trends and development prospects.

ANALYSIS AND RESULTS

Today, youth employment through labor agencies is one of the most important directions of modern labor market policy. From a statistical point of view, this process



should be viewed not as a simple set of numbers, but as a complex system that assesses institutional efficiency, the level of resource utilization, and effectiveness.

The cause-and-effect relationships, regional differences, and hidden factors behind any indicators are analyzed in depth. In particular, three main components are important in the process of youth employment: (1) the volume of services provided by labor agencies; (2) the degree to which these services translate into real results - job placement; (3) the effectiveness of the vocational training system as an intermediate mechanism. From this point of view, a high volume of services does not always mean high effectiveness. On the contrary, the fact that some regions achieve high efficiency with relatively few resources indicates that the quality of management,

labor market infrastructure, and regional economic conditions vary within the system. This means that in addition to simple absolute indicators, relative indicators and efficiency indices should be used in statistical analysis. In addition, vocational training indicators require special attention. Since this factor is considered as a strategic instrument that ensures not short-term, but long-term employment. If there is a strong connection between training and employment, the system will develop sustainably; otherwise, resources will be spent inefficiently.

Also, although the low share of social support measures (pensions and subsidies) indicates that the system is oriented towards active policies, the sharp differences in these indicators across regions make it necessary to separately analyze the level of social equality and targeting.

Table 1.
Information on employment of young people by labor authorities (person)

No	Name of the regions	Services provided	Those who are employed	Professionally trained	the number of unemployment benefits	Subsidies allocated to young people
1	Republic of Karakalpakstan	12795	10178	2613	4	29
2	Andijan	17581	11230	6340	11	8
3	Bukhara	13915	10072	3724	119	137
4	Jizzakh	10684	6918	3725	41	9
5	Kashkadarya	20552	13704	6821	27	32
6	Navoi	8283	6632	1647	4	2
7	Namangan	12303	7612	4682	9	41
8	Samarkand	17121	13201	3848	72	13
9	Surkhandarya	14546	9973	4492	81	14
10	Syrdarya	9710	6706	2969	35	9
11	Tashkent city.	20998	12152	8758	88	5
12	Fergana	18714	12836	5852	26	32
13	Khorezm	25270	16664	8540	66	8
14	Tashkent city.	14657	10971	3682	4	7

217129

148849

67693

587

Based on the data in the table above, it is possible to analyze the state of employment of young people by labor authorities in general and by region. In general, 217,129 services were provided throughout the republic, of which 148,849 young people were employed. This indicates that the employment rate is approximately 68.5 percent. At the same time, 67,693 young people were trained in a profession, which is almost 31 percent of the total number of services. The number of people assigned unemployment benefits is 587, which is a very low share (less than 0.3 percent). This indicates that the system is mainly focused on

active employment policy, that is, on employment and vocational training of young people. When analyzed by region, there are significant differences between the volume of services and the level of effectiveness. For example, the largest number of services (25,270) and the number of people placed in jobs is also high in Khorezm region (16,664 people). In addition, the employment indicators in Kashkadarya, Samarkand, Fergana and Tashkent regions are also relatively high. This indicates that the labor market is more active in these regions or the activities of labor authorities are more effectively organized.



However, in some regions, a low volume of services or an insufficient level of efficiency are observed. In particular, the number of people placed in jobs in Navoi, Jizzakh and Syrdarya regions is relatively small. At the same time, despite the large number of services in some regions, the share of employment is lower. For example, in Tashkent region, although 20,998 services were provided, the level of employment is lower than in other regions. This indicates the need to increase the efficiency of resource use. Vocational training indicators are also important. The highest indicators were recorded in Tashkent region, Khorezm, Kashkadarya and Andijan regions. In these regions, great attention is paid to training young people in professions suitable for the labor market. In the future, this factor may have a

positive impact on increasing the level of employment. As for social support measures, subsidies and unemployment benefits are unevenly distributed across regions. The number of subsidies and benefits is relatively high in Bukhara region, which indicates that social protection mechanisms are being used more actively in this region. In other regions, these indicators are much lower.

The youth employment system across the republic is operating quite effectively. However, there are disparities between regions, and in some regions it is necessary to increase the efficiency of employment, improve the quality of services, and further develop the vocational training system.

2-жадвал.

Иш берувчи ташкилотлар томонидан номзодларга қўйилаётган малака талаблари ҳақида маълумот

№	Job title	Number of requirements per candidate	Information requirements	Qualification requirements
1	Assistant Minister	1	Supreme	–
2	Social orders away based on regions drink and sewage water systems development department chief	1	Supreme	Have a higher education in the field of drinking water and wastewater systems or finance and economics; Those with an international advanced training certificate are encouraged; Have at least 5 years of work experience in government agencies; Have worked in government agencies in the field of drinking water and wastewater systems or finance and economics for at least 2-3 years as a deputy head of department or head of department; Have knowledge of regulatory and legal documents in the field, news in the field, and ongoing work; Have participated in the development of draft resolutions of the President of the Republic of Uzbekistan and the Government; Be able to work with documents in Uzbek (in the Latin alphabet) and Russian, and have experience in speaking and writing in these languages; Be hardworking and approach their duties responsibly; Have the ability to present their opinions and proposals.



3	Ижро интизомини таъминлаш бошқармаси бошлиғи	1	Supreme	Have a higher education in the field; Have worked in government organizations in the field of executive discipline and control for at least 1 year as a head or deputy head of a department; Those who have a certificate of advanced training in this field are encouraged; Have knowledge of regulatory and legal documents in the field, industry news, and ongoing work; Be familiar with information and communication technologies, including Microsoft Word and Excel; Be able to work with documents in Uzbek (in the Latin alphabet) and Russian, and have experience in speaking and writing in these languages; Be hardworking and take their duties responsibly; Have the ability to present their opinions and suggestions.
4	Compliance - control and internal audit department chief	1	Supreme	Have a higher legal or economic education in the relevant field; Have a total of 5 years of work experience in government organizations, and at least 1-2 years of work as a department head in the relevant field (fighting corruption); Those with a certificate of advanced training in this field are encouraged; Have information about regulatory and legal documents in the field, industry news, and ongoing work; Be familiar with information and communication technologies, including Microsoft Word and Excel; Be able to work with documents in Uzbek (in the Latin alphabet) and Russian, and have experience in speaking and writing in these languages; Be hardworking and take their duties seriously; Be able to present their own opinions and proposals. Be eloquent and able to attract an audience
5	Head of the Development Department for the Development of a Management System for Multi-Storey Buildings	1	Supreme	Higher education in the field and at least 3 years of work experience in the management system of multi-storey buildings, of which 1 year was spent in a managerial position (at least as a head of department); Knowledge of information and communication technologies, including Microsoft Word and Excel; Working in the state language, knowledge of Russian and English is supported; Hardworking and responsible approach to one's duties; Fulfillment of the requirements of the established job description. Higher education in finance (economics) and at least 2 years of work experience; Thorough knowledge of information and communication technologies, including Microsoft Word, Excel and PowerPoint; Working in the state language, as well as knowledge of English and Russian (working in English is supported); Hardworking and responsible approach to one's duties; Fulfillment of the requirements of the established job description.



6	Chief Specialist of the Department for the Formation of Investment Programs and Cooperation with International Financial Institutions	1	Supreme	Higher education in the field and at least 3 years of work experience in the management system of multi-storey buildings, of which 1 year was spent in a managerial position (at least as a head of department); Knowledge of information and communication technologies, including Microsoft Word and Excel; Working in the state language, knowledge of Russian and English is supported; Hardworking and responsible approach to one's duties; Fulfillment of the requirements of the established job description. Higher education in finance (economics) and at least 2 years of work experience; Thorough knowledge of information and communication technologies, including Microsoft Word, Excel and PowerPoint; Working in the state language, as well as knowledge of English and Russian (working in English is supported); Hardworking and responsible approach to one's duties; Fulfillment of the requirements of the established job description.
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Based on the above data, a statistical analysis of the qualification requirements set by employers for candidates shows that the demand for personnel in the modern labor market is growing qualitatively. Here, the main attention should be paid to the standardization, differentiation and level of complexity of requirements in the cross-section of positions.

Firstly, the number of candidates for all 6 vacancies listed in the table is 1, which means that these positions require highly qualified and narrowly focused specialists. Higher education is a mandatory requirement for all vacancies. This indicates that the need for highly qualified personnel in the labor market is an absolute priority.

When analyzing the content of qualification requirements, they can be conditionally divided into several main groups. Firstly, work experience is the main criterion for all managerial positions (head of department, head of department). For example, some positions require at least 5 years of total work experience and 2-3 years of managerial experience. This means that employers attach great importance not only to theoretical knowledge, but also to practical management skills.

Secondly, almost all vacancies require knowledge of regulatory legal acts and have sectoral knowledge. This indicates that legal literacy is an important factor for personnel working in the public administration system. At the same time, the fact that some positions require a high level of experience, such as participation in the development of presidential and government decisions,

indicates that the demand for personnel is at a high institutional level.

Thirdly, as a modern trend, knowledge of information and communication technologies (especially Microsoft Word, Excel, PowerPoint) is included as a general requirement in all vacancies. This confirms that basic digital skills are necessary for any specialist in the conditions of digitization.

Fourthly, the demand for language skills is also high. While working in Uzbek and Russian is mandatory in most positions, knowledge of English is considered an advantage in some. This indicates that multilingual competence is gaining importance in the labor market. Fifth, when analyzing personal competencies, almost the same requirements are repeated in all vacancies: hard work, responsibility, initiative and the ability to freely express opinions. This means that the importance of "soft skills" is increasing.

At the same time, some vacancies also have additional requirements. For example, requirements such as international certificates, experience in the fight against corruption or the ability to attract an audience indicate the specialization of a particular position.

In conclusion, this data shows that the requirements placed on candidates by employers are complex and multi-component. That is, in the modern labor market, not only higher education is not enough, but also a combination of work experience, digital skills, language skills and personal competencies is required. This justifies the need to further improve the personnel training system based on the requirements of the labor market.



CONCLUSIONS AND RESULTS

Based on the above analysis, the general conclusion is that the qualification requirements set by employers for candidates reflect the qualitatively new level of the modern labor market. That is, the demand for personnel has gone beyond simple knowledge and diplomas and has become a system of complex competencies.

The fact that higher education is mandatory for all vacancies indicates that the need for highly qualified personnel is stable and priority. At the same time, work experience, especially many years of practical work required for management positions, means that practical skills are more important for employers than theoretical knowledge. This indicates that the concept of a "ready-made specialist" is being formed in the labor market.

The analysis also shows that skills such as regulatory and legal knowledge, mastery of information and communication technologies, and knowledge of several languages have become universal requirements for almost all positions. This means that in the conditions of digitalization and globalization, multi-faceted training is required from specialists.

At the same time, personal qualities - such as responsibility, initiative, and communication skills - "soft skills" - are also emerging as one of the main criteria. This shows that organizations are in need of personnel who are not only knowledgeable, but also able to work effectively and actively participate in the team.

In general, these data confirm that competition in the labor market is increasing and that candidates are required to have a combination of knowledge, experience, and personal abilities to succeed in it. This, in turn, determines the need to bring the education system and personnel training process closer to practice and adapt it to market requirements.

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