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DIGITIZATION OF HOUSING CONSTRUCTION IN RURAL AREAS AND IMPROVEMENT OF MANAGEMENT EFFICIENCY

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Abstract:

In this article, the construction of housing in rural areas, digitization of housing, increasing the efficiency of housing management, the nature and formation of the labor market in housing, the causes of unemployment, its reduction, words such as horizontal integration and project in housing construction are covered

Keywords: housing maintenance, housing maintenance in rural areas, digitization of housing, increasing the efficiency of housing management, the nature and formation of the labor market in housing, the causes of unemployment, its reduction, horizontal integration and housing construction project.

ENTER. Currently, the development of an effective mechanism that ensures the transformation of management decisions in the field of production into a finished product and the organization of cost-effective production is one of the urgent issues of our national enterprises. This creates the need for the formation and effective development of labor in industrial enterprises in the context of digitalization of the economy.

Laws of the Republic of Uzbekistan No. UzRQ-642 dated October 20, 2020 "On Employment of the Population", No. PF-4947 dated February 7, 2017 "On the Strategy of Actions for Further Development of the Republic of Uzbekistan", dated April 3, 2020 "Population during the Corona Virus Pandemic, This article is of a certain importance in ensuring the execution of the decrees "On additional measures to support economic sectors and business entities" and in the implementation of tasks specified in other regulatory legal documents on the subject.

LEVEL OF STUDY OF THE ISSUE. Among the foreign scientists, the importance of work in the development of the state was widely covered in the works of famous scientists in the field of classical economics, A. Oaken, K. McConnell, D. Ricardo, D. Keynes, taking into account the relationship between cause and effect.

LABOR EFFICIENCY Adamchuk VV, Blyakhman AS, Kuzmin SA, Maslova IS, Odegov Yu.G., Pavlenkov VA, Romashov OV, Rudenko GG, Slezinger GE, A.Kibanov from CIS countries to study problems of unemployment, employment of the population, employment service , A. Kotlyar, G. Avagyan, V. Plaksya, D. Markovich and others made a worthy contribution. Uzbek scientists K. Abdurahmonov, R. Ubaidullaeva, S. Abdullayev, Sh. Zaynutdinov, B. Murtazayev, N. Tokhliyev, Kh. Abulkosimov, D. Rahimova, O. Ata-Mirzayev, B. Umurzakov, Sh. Kholmominov participated in the study of these problems, D. Ortikova and other scientists' scientific works are dedicated.

THE ESSENCE OF THE LABOR MARKET IN SCIENTIFIC RESEARCH, its formation, causes of unemployment and ways to reduce it are fully revealed. Also, the socio-economic mechanism of improving labor organization in housing construction in rural areas in the conditions of digitalization of the economy has not been sufficiently researched. The importance of this problem in the era of market economy relations makes it possible to determine the relevance of the topic of the article, its purpose and main tasks.

SCIENTIFIC NOVELTY OF THE TOPIC - in the conditions of digitalization of the economy, scientifically based proposals and recommendations were developed for researching the features of improving the organization of labor in housing construction in rural areas. Based on this goal, the following was defined as the scientific novelty of the topic:

- clarifying the socio-economic nature and content of improving the organization of labor in the

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construction of housing in rural areas and determining its composition in the conditions of digitalization of the economy;

- classification of methods and means of improving labor organization in housing construction in rural areas in conditions of digitization of the economy;
- analysis of the state of labor organization in housing construction in rural areas and the factors affecting it;
- development of conclusions and recommendations on improving the organization of labor in housing construction in rural areas in the conditions of digitalization of the economy.

OFFICIAL DOCUMENTS OF THE REPUBLIC OF UZBEKISTAN, The President of our Republic Sh.M. The Decree of the President of the Republic of Uzbekistan "On the Development Strategy of New Uzbekistan for 2022-2026" developed by Mirziyoyev, his decisions, his works on the market economy in a social direction, employment of the population, labor market, econometric modeling, targeted complex programs, marketing and sociological topics the scientific works of foreign and domestic scientists served in this regard. The decision of the Cabinet of Ministers of the Republic of Uzbekistan on the digitalization of the economy and the establishment of a multi-system economy was used in the preparation of the article.

The system of principles of the digital organization of labor requires the introduction of general methodological and some special principles specific to certain socio-economic sciences, the content of which finds its own expression only in the organization of digital labor.

Thus, in this article, in our opinion, the most important methodological principles of digital organization of work are:

- ✓ integration into the digital network environment (including digital platforms and ecosystems);
- ✓ flexibility;
- ✓ efficiency;
- ✓ humanization and improvement of the quality of working life;
- ✓ normative.

The principle of inclusion in the digital network environment (including digital platforms and ecosystems) is one of the most important in the organization of digital work, and is directly related to the digital organization of the production of goods and services, which implies vertical and horizontal integration in the chains of value creation. Vertical integration integrates all information about operational processes, their efficiency, quality management and more in real-time across the entire organization in an integrated network from product development to manufacturing, logistics and service.

Horizontal integration goes beyond internal operations and includes vendors, consumers, and all key partners in the value chain.

Vertical and horizontal integration based on digital platforms is one of the main operating models today, enabled by the network effects of digital transformation. In this regard, companies as economic entities create their own platforms and participate in the formation of third-party digital platforms and ecosystems that interact with consumers, suppliers, competitors, regulators, etc. Through digital platforms (and ecosystems), business models are implemented, which is essential to maintain the competitive advantages of organizations, to ensure their integrity and relevance as independent entities in the new economic relationship.

Organizations participate in the development of digital platforms to use limited resources, perform business processes (functions), and implement individual goals. End-to-end integration of multiple platforms allows business models to be designed and implemented as efficiently as possible. At the same time, transaction costs are optimized through high-tech network distributed solutions.

Since many issues of designing and implementing modern work processes can be solved only by taking into account the architecture of certain digital platforms and ecosystems, all these situations should be taken into account when solving the problems of digital organization of work.

The principle of flexibility arises from the demand for digital production of multi-functional oriented professional activity, in which the transition from the operational form of labor organization to multi-operational integration of functions and professions is carried out. Thus, for example, the prevention, repair and reprogramming of equipment is now given to key workers. In addition, in highly dynamic environments, workers must perform "some managerial functions in addition to their technological functions."

This is the result of flexible organization of not only production, but also labor.

On the other hand, the principle of flexibility is manifested in the need for work systems to adequately respond to external and internal influences and to

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have the ability to purposefully change according to the development trends of digital platforms and ecosystems. To implement the principle of flexibility, decisions within the framework of the main directions of the organization of digital work should be developed so that changes can be made to them in connection with changing conditions.

EFFICIENCY PRINCIPLE means that decisions in the field of digital organization of labor should provide the expected (predicted) result (economic and/or social impact) in a certain period of time with reasonable costs for their implementation. Based on the fact that many solutions in this field are multifaceted, that is, the final result can be achieved by several alternative methods, the determination of the most effective, optimal solutions in the field of digital labor organization is based on the extensive use of economic and mathematical methods, and the analytical capabilities of artificial intelligence., digital modeling and more.

THE PRINCIPLE OF HUMANIZATION OF LABOR (lat. humanus - human) and improving the quality of working life is aimed at creating favorable conditions for a person's work, demonstrating his creative abilities, professional self-awareness, confirming his benefit as a criterion for evaluating socio-economic relations. The humanization of labor is designed to reflect and take into account the unique relationships between society, business, man and his environment in the context of global problems to improve the human way of life.

In this regard, the humanization of labor in the digital economy, first of all, the sphere of human freedom by creating human network interaction, protecting his legitimate interests as a free agent of labor relations, eliminating the causes of professional decline, ensuring security (including information). should be aimed at expansion.

In foreign science and practice, issues of humanization of labor are reflected in the concept of the quality of working life, its implementation is aimed at increasing workers' satisfaction with their work.

A similar point of view on issues of humanization of labor is presented in the methodological approaches of the International Labor Organization (ILO). Thus, the ILO proposed the concept of "decent work", the content of which is very close to the concept of "quality of working life". According to the definition of the International Labor Organization, decent work is effective work in decent and safe conditions, gives satisfaction to the employee, the opportunity to fully demonstrate his abilities, skills and abilities, works with decent wages and fair distribution of the fruits of development, the rights of laborers are protected.

The ILO's Decent Work Pilot Program provides a more detailed definition of decent work, which states that decent work is "work that provides sufficient income while allowing time for other aspects of life, family stability, respect for human rights, the right to vote is defined as work that gives and opens the way to social integration. Decent work is a bridge between economic and social goals."

ILO proposes to use a system of indicators to quantify decent work, which allows to assess the following: the possibility of obtaining and freely choosing a job; productivity, employment and adequacy levels, fairness to the employed; job satisfaction; level of stability and security of work; safety of work and personal life conditions; social protection status; a harmonious combination of conditions for work and personal life and other socio-economic parameters. ILO has highlighted the following as the main criteria for assessing decent work: decent wages, effective employment, effective social partnership, social protection system for workers.

In this regard, the digital organization of labor should have a high level of humanism, because the regulation of the quality of work life is the most important institution included in digital socio-economic relations. In our opinion, humanization of the digital organization of labor in the conditions of Uzbekistan is possible based on the restoration of value indicators related to social justice and responsibility.

In order to assess the performance of digitization of housing construction in rural areas, as well as to make a decision on further expansion of the pilot project at the enterprise, comparison of digitization data with video surveillance data was carried out.

Note that the human factor was taken into account during the project, for example, turning the clock "backwards". This point was taken into account in the modeling of data from wearable gadgets: the classification model accurately determines that 90% of employees are wearing a watch correctly. In the case of poorly worn wristbands, a linear transformation of the raw data allows the same activity detection models to be used.

During the anomaly detection experiments, drunkenness in the workplace was detected:

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anomalies appeared in a worker who was intoxicated during the time period associated with the movement.

The results of data comparison revealed the following:

1. The model includes rest time - lunch break (not related to working time), breaks arranged for rest and personal needs, loss of working time due to organizational and technical reasons, as well as a number of activities with low physical activity (studying documents, inspection of equipment without moving, etc.).

2. The movement time in the model includes the entire movement time of the employee (from the workplace to the dining room, going around and checking the equipment, going to the locksmith shop, moving between the equipment during work, etc.).

The categories (breathing, moving, working) sometimes didn't exactly match the video, sometimes the categories seemed to be presented in a chaotic manner.

During the pilot project, employees of the director's service for working with the company's employees conducted photographic surveillance of the workers participating in the pilot project. The results are presented in Table 1.1.

The results of the comparison of model data, standard photographic observation data and video viewing data by factory experts are presented in Table 1.2.

Table 1.1
Photographic tracking data

Indicator	20 august	21 august	Average
Work including:	67.2	88.5	77.9
Main	54.4	68.6	61.5
Assistant		- 4.6	4.6
Preparation and final time	6.0	4.5	5.3
Workplace maintenance	6.8	10.8	8.8
Moving holiday	15,	13.4	9.3
Loss	14.5	8.0	**11.3**
Work including:	3.1	0.0	1.6

Table 1.2
Analysis of pilot project data (total), %

Indicator	Standard Tracking Information (August 20)	System Information (09/28–09/30)	Video surveillance information (28.09–30.09)
Work including:	77.9	40.5	66.1
Main	61.5	0.0	39.4
Assistant	4.6	0.0	19.1
Preparation and final time	5.3	0.0	1.4
Workplace maintenance	8.8	0.0	6.1
Moving holiday	9.3	20.8	9.9
Loss	11.3	37.6	10.0

Also, the company's specialists prepared a calculation of the economic efficiency of the introduction of an automated system for monitoring the work of repair service workers based on the analysis of data from the sensors of wearable devices (Table 1.3):

Table 1.3
On the introduction of an automated system for monitoring the economic efficiency (labor of the benefit service workers

No	Name of indicators	Units	Variant indicators	
			main	new
1.	Capital expenditure	thousand soums.		40.00

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	Operator's workplace (monitor + personal computer + card reader)			40.00
	Server systems		-	-
2.	Costs in the basic version:	thousand soums	8,513.08	
	Number of workers servicing equipment in the workshop	person	11	
	Workers of IHF + YaST Central Repair Workshop	thousand soums.	8 183.1	
	Expenses for work clothes, personal protective equipment, milk	thousand soums.	330.0	
3.	Costs in the new option:	thousand soums.		10,888.20
	Number of workers servicing the equipment	person		10
	Workers of IHF + YaST centralized repair shop	thousand soums		7 439.2
	IHF + YaST (the number of additional employees for the implementation of the project - 3 people)	One thousand soums		2 849.04
	The cost of research is one thousand soums.			
	Samsung Galaxy Active ZM-P500 watch with contactless charger (2 pieces per worker)	thousand soums.		300.00
	Work clothes, personal protective equipment, milk costs	thousand soums		300.00
	Increase costs	thousand soums		-2 375.12

- data from wristbands worn by employees should be received in opera mode (with a delay of no more than 1 day), and employees should not be video-monitored, and employees should not wear video cameras (this situation was not observed during experimental work within the pilot project).

- it is necessary to introduce additional rates in the amount of 3 to 5 people in the department of information technologies and automation, as well as in the labor department. (to continuously monitor the project). If the project spreads to other professions, the need for additional numbers will increase, because training the model for new professions will require videography and time tracking, processing of the received data (marking, systematization, etc).

SUMMARY. According to the results of research and proposals, it is planned to launch a monitoring system for the activities of workers in 2021. At the main site (including 700 people at the same time), the expected decrease in the number of 15-20% (150-200 people), annual personnel costs (FZP including insurance premiums) - 60-80 million soums.

The novelty of the project is not only the automation of the collection of information about the actions of employees through the use of wearable gadgets, but also the use of machine learning to monitor human activity.

The project showed that just analyzing opera-movements and providing feedback to the employee has the potential to improve efficiency at least 15% of the time. Performance evaluation was performed according to recognition guidelines as the average of one worker in 1 day. Accuracy was assumed to be 50% in the opposite time interval.

The ability to identify ways to optimize business processes through constant monitoring of the actions of colleagues, which can have a huge economic and organizational effect at the organization level, has been confirmed. For example, there may be options for optimization - changing the logistics processes of repair, optimizing (increasing or reducing) the number of people in the crew to increase labor productivity, and other factors of labor organization.

At the same time, any optimization should be methodologically justified in terms of opportunities for increasing labor efficiency, which is discussed in detail in the work.

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