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IMPROVING THE INVESTMENT EFFICIENCY AND MORTGAGE LENDING IN HOUSING CONSTRUCTION

Abstract: *This article is devoted to the urgent problem of attracting investment in housing, also discusses current practice for assessing the effectiveness of investments and mortgage lending in housing.*

Key words: *housing, real estate market, real estate, affordable housing, investment, investment and construction complex, investment climate, consumer lending, mortgage, mortgage lending, securitization of mortgage assets, housing value.*

Language: *English*

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Introduction

The provision of housing and its availability for the population is an important factor in the socio-economic development of the country. This has a direct impact on the standard of living is reflected in the demographic situation in the country, also affects the economic culture of the population, since the purchase of housing requires significant financial investments [3].

According to the State Statistics Committee, the resident population in Uzbekistan as of July 1, 2020 was 34.19 million people, of which the rural population - 16.89 million people (49.4%), and the urban population - 17.3 million people (50.6%) [9].

URGENCY

The current stage of development of domestic housing construction was characterized by a rapid increase in large-scale volumes of residential buildings, as well as the emergence of new financial services that provide the population with the opportunity to purchase housing in newly constructed and constructed buildings. In terms of development rates, the construction industry over the past three years has been one of the fastest growing sectors of the economy of the Republic of Uzbekistan, defining one of the most priority areas of its development. On the other hand, the growth in the volume of housing construction projects under construction makes it possible to provide the population with new high-quality and modern housing, which contributes to the implementation of the most important task - improving the status of the socio-economic situation of society, set by the President of the Republic of Uzbekistan.

But, unfortunately, there are some nuances regarding the rate of growth in the cost of housing make it inaccessible for everyone to purchase it for the majority of the country's population. This is not only a problem for the republic, but also a typical situation for many countries with a developed market economy system, characterized by an incomparably higher standard of living of the population than in Uzbekistan. The importance of solving the housing problem is not only socially important, but also the most important economic underpinnings, which consists in creating conditions and a mechanism for further financing the activities of the country's investment and construction complex and, as a result, gaining a sustainable development of the domestic economy, creating new jobs, positive development of others. factors in the national economy.

The study of the time series - the growth rates of the commissioning of residential buildings in the state and non-state sectors shows that the construction of housing by individual developers is proceeding at a

higher pace than in the public sector. This, in turn, entails the need for a dynamic development of the wholesale building materials market. In addition, the question arises about the need to develop mortgage lending and the allocation of soft loans for the population. And if we develop the thought further, then we are talking about changes in the entire legal sphere, namely, legislation in the field of housing construction.

THEORETICAL APPROCHES

As noted in the Decrees of the President of the Republic of Uzbekistan dated 13 May 2019, N5715 "On additional measures for the development and expansion of the mortgage lending market" and dated 28 November 2019, N5886 "On additional measures to improve the mechanisms of mortgage lending", the expansion of the practice of mortgage lending in 2016-2018 ensured the commissioning of more than 82 000 houses. As a result, about 400 000 citizens across the country have improved their living conditions [1;2]. The decree also approved the "Road Map" for the development of the mortgage lending system in the Republic of Uzbekistan for 2019-2021.

At the same time, the need to develop the country's housing sector necessitates the adoption of additional measures to improve the mechanisms of mortgage lending and expand access to mortgage loans for all segments of the population based on market principles.

If we consider the size of investments in housing construction, we can say about its growth from 3243 billion soums in 2011 to 17 695.8 billion soums in 2018, or 5.5 times [6.7]. At the same time, the share of investments in housing construction is stable at the level of 9.2-16.2%, which indicates that the state pays great attention to this important socio-economic sphere.

ANALYTICAL PART

In Uzbekistan, the indicators of the commissioning of fixed assets are dynamically growing, including due to housing construction. The commissioning of residential buildings increased from 9 203.3 thousand sq. m. in 2011, up to 14 483.5 thousand sq. m. in 2019, or almost 1.6 times (Diagram 1.).

All the data presented indicate the high practical significance of issues related to the development of housing construction, since it should provide a tangible increase in the housing stock with different rates of this increase in certain regions, regions, cities and rural areas.

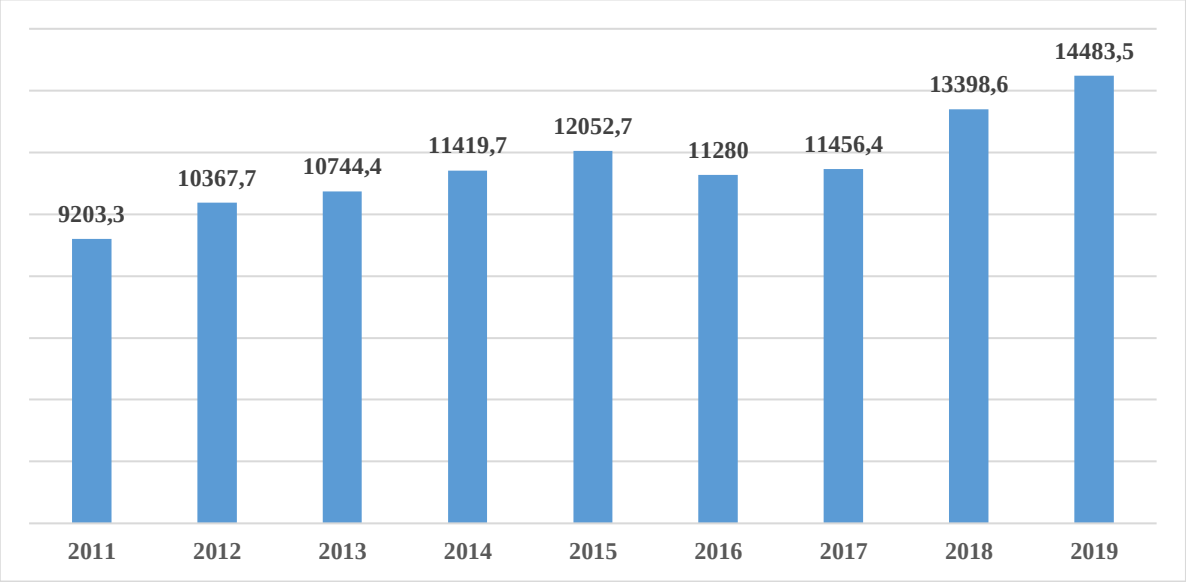

Diagram 1. Dynamics of commissioning residential buildings (thnd. sq. m) [8]

According to the State Statistics Committee, the housing stock of Uzbekistan is 521.2 million sq. m. (as of 01.01.2019), of which private housing stock - 517.9 million sq. m. (99.3%), public housing stock - 3.3 million sq. m (0.7%). Housing provision per inhabitant averaged 15.8 sq. m. [8].

The methods of classical consumer lending of the population for the purchase of housing indicate that it cannot be massive, because consumer loans are expensive for a number of objective reasons, and their use significantly increases the already prohibitively high cost of real estate for the majority of the country's population. In addition, it is necessary to take into account that, in comparison with many other sectors of the economy, the payback period of investments in the construction industry is sometimes much longer, and this circumstance is an unfavorable factor in the struggle for investment resources in the competitive

financial borrowing market. Moreover, the payback period of a particular investment and construction project directly affects the availability of investment resources and their cost.

Nevertheless, in the world economy, to solve the housing problem as a whole, a mechanism has been developed for financing the purchase of real estate by the population, which is known as mortgage lending. The funds received on the mortgage are used to finance the activities of the construction complex and ensure the functioning of the investment process in the construction industry. By its economic essence, a mortgage is a type of lending against real estate guarantees with more favorable indicators than direct consumer loans. Of course, such a financial mechanism in the housing investment market is promising.

An example is the state of investment and construction activities in the republic for 2011-2019 (Table 1.).

Table 1. Main socio-economic indicators of investment and construction activities *(in actual prices, billion soums)*

	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Fixed capital investments - total	19500	24455,3	30490,1	37646,2	44810,4	51232	72155,2	124231,3	189924,3
Fixed capital investment as a percentage of GDP	20,1	20,3	21,1	21,3	21,3	21,1	23,9	30,6	37,1
Commissioning of housing and social and cultural facilities due to new construction and reconstruction: resi-dential buildings, thou-sand sq. m. of total area	9203,3	10367,7	10744,4	11419,7	12052,7	11280,0	11456,4	13398,6	14483,5
secondary schools, thousand student places	46,9	68,9	61,7	61,5	57,9	88,9	94,6	80,4	111,4
professional colleges, thousands of student places	1,8	10,2	8,9	3,6	3,2	3,3	0,2	-	-
lyceums, thousands of student places	2,4	1,3	0,2	0,3	1,5	1,5	-	-	-
academic, one thousand student places	1,1	0,9	0,2	-	0,8	1,2	-	-	-
specialized, thousands of student places	1,3	0,4	-	0,3	0,7	0,3	-	-	-

hospitals, thousands of beds	4,8	6,1	9,5	10	10,3	10,1	4,3	6,1	6,6
polyclinics, including rural medical posts, number of visits per shift	5,6	8,9	10,1	10,1	7,3	9,9	7,7	20	18,7
Construction work, billion soums	9504, 8	11753, 9	15219, 3	20060, 4	25423, 1	29413, 9	34698, 0	51129,3	68854,4

Source: https://stat.uz/ru/164-ofytsyalnaia-statystyka-ru/6584-investitsii

In this regard, the problem of analyzing investments in housing construction and assessing their effectiveness is currently very relevant for the construction industry of the Republic of Uzbekistan. This problem is interconnected with the tasks of forming a promising investment policy and ensuring a favorable investment climate in the domestic economy.

The solution to these problems is due to the fact that in a market economy, an active role in the strategic development of the construction industry is played to a greater extent by investments, the formation of which takes place within the framework of a favorable investment climate.

The investment climate is, in turn, the financial environment in which investment processes take place, accompanied by various types of investment risks. Depending on the developing investment climate in a particular sector of the national economy, a certain investor policy is formed, which determines either the inflow or outflow of investment resources.

It is known that in a favorable investment climate within the framework of any industry there is an inflow of investment resources. On the other hand, an unfavorable investment climate reduces the efficiency of investment processes and increases the investment risk. This leads to a decrease in financial flows, an increase in negative consequences for the economy of the investment and construction sector. Thus, investment risks and, in particular, the risks of certain mortgage assets are one of the most important market regulators of the investment climate in the construction industry.

In the context of creating a favorable investment climate and determining a productive investment policy in the housing construction industry, the most important problem is the formation and refinement of the classification, as well as the development of methodological tools for managing mortgage lending risks, since they exist for both the investor and the borrower. The solution to this problem is carried out by methods of risk management known in science, first of all, such as diversification and hedging. [4].

One of the latest methods of hedging mortgage lending risks is the securitization of mortgage assets. This method of reducing mortgage risks consists in corporatisation of mortgage assets, as well as the subsequent free circulation of these shares on stock exchanges. As in general, mortgage lending, and in particular the securitization of mortgage assets is a new direction for the national economy in the development of risk management within the construction industry and, of course, is an urgent problem [5].

In order to take into account in full and, most importantly, to solve these problems in practice, it is necessary to implement a program for the localization of the production of building materials, parts and structures in Uzbekistan. Further, it is necessary to fully implement the provisions of the legislation of the Republic of Uzbekistan, with the aim of a reasonable movement forward in the development of housing construction, on the basis of compliance with all building codes and regulations; development of a competitive environment in the housing construction market; fully implement the adopted investment programs.

The solution to the problem of housing provision is associated with the need to significantly increase the volume of construction and the development of all elements of the infrastructure of cities and towns in Uzbekistan, using progressive approaches.

Hence, these factors, which should be taken into account when solving the housing problem under consideration, undoubtedly include:

- the limited areas available for construction and the associated need for priority development of multi-storey housing construction;
- the need to take into account the objective process of social stratification of society and the associated expansion of the range of requirements for living conditions;
- an increase in the level of urbanization, as a result of the ongoing industrialization of agriculture, which entails the consolidation of existing rural settlements;
- low level of comfort of a part of the existing housing stock;
- an objective increase in requirements for the comfort of housing due to scientific and technological progress.

CONCLUSION

It can be concluded that there are positive shifts and positive results in its solution, achieved through the rational use of the market mechanism. Nevertheless, a full-scale solution to this problem requires additional searches and studies, which should be based on a deeper assessment of the state of housing construction and the emerging housing market.

Thus, based on the analysis and comparison of domestic and international investment performance indicators, the following conclusions can be drawn:

- the indicator of net present value takes into account the entire life of the project, the time value of money, and also allows you to determine the most profitable project. The selection of construction projects based on the criterion of net present value is correct only for projects with the same life span. To compare projects with different lifespan, it is advisable to bring their lifespan to the same period;

- the indicator of the internal rate of return guarantees the lower level of profitability of the investment project, the independence and objectivity of the calculation results from the absolute size of the investment. However, the criterion is not very suitable for ranking investment projects by the level of their profitability. Differs in high sensitivity from the accuracy of estimates of future cash flows;

- the profitability index allows to provide favorable opportunities for the formation of the most effective portfolio of investment projects. It characterizes the economic efficiency of projects in the best way. The disadvantages include the inability to take into account the factor of the scale of projects, the results may conflict with calculations using the net present value method;

- the discounted payback period of investments provides the ability to obtain a fairly quick assessment of the calculation results in the event of a lack of resources. However, it does not take into account cash flows outside the payback period of the investment. As a result, of using this indicator, it is possible to obtain an approximate assessment of the level of investment risk;

- the interests of the builder and the investor are combined in the case when the investment project meets the indicators of reliability, profitability and liquidity.

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DETERMINATION OF THE PARAMETERS OF THE STRESS FIELDS OF THE ROCK MASS AROUND THE VERTICAL WORKING OF THE CIRCULAR CROSS-SECTION

Abstract: *The article deals with the problem of the stress-strain state of a rock mass around a vertical working of a circular cross-section. An exact formulation of the three-dimensional problem of the deformation of a half-space weakened by a deep cylindrical cavity is used. The stress-strain state of a half-space, as a three-dimensional body, strictly obeys the basic requirements of the three-dimensional linear theory of elasticity and is described by its corresponding equations and relations in a cylindrical coordinate system. The specific problem of rock mechanics has been solved, i.e. the considered rock mass works only in compression. The deformation process and stress state around vertical shafts of circular cross-section are expressed in terms of stress functions. Calculation formulas are derived for all nonzero components of the strain and stress tensors, taking into account the axisymmetry of the problem under consideration, represented in terms of stress functions.*

Key words: *rock mass, vertical working, shaft of vertical mines, stress fields, deformation process, stress function.*

Language: *Russian*

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ОПРЕДЕЛЕНИЕ ПАРАМЕТРОВ ПОЛЕЙ НАПРЯЖЕНИЙ МАССИВА ГОРНЫХ ПОРОД ВОКРУГ ВЕРТИКАЛЬНОЙ ВЫРАБОТКИ КРУГОВОГО ПОПЕРЕЧНОГО СЕЧЕНИЯ

Аннотация: *В статье рассмотрена задача о напряженно-деформированном состоянии массива горных пород вокруг вертикальной выработки кругового поперечного сечения. Использована точная постановка трехмерной задачи о деформации полупространства, ослабленной глубокой цилиндрической полостью. Считается, что напряженно-деформированное состояние полупространства, как трехмерного тела, строго подчиняется основным соотношениям трехмерной линейной теории упругости и описывается её соответствующими уравнениями и соотношениями в цилиндрической системе координат. Решена*

конкретная задача механики горных пород, при условии, что рассматриваемый массив горных пород работает только на сжатие. Компоненты деформации и напряженного состояния вокруг стволов вертикальных шахт кругового сечения выражены через функции напряжения. Выведены формулы вычисления для всех отличных от нуля компонент тензоров деформаций и напряжений, с учетом осесимметричности рассматриваемой задачи.

***Ключевые слова**: массив горных пород, вертикальная выработка, ствол вертикальных шахт, поля напряжений, процесс деформации, функция напряжения.*

Введение

Реальные горные породы, особенно в условиях их естественного залегания, проявляют упругие [6], пластические [7] и вязкие [18] свойства. При этом по данным ряда авторов [3, 7, 9, 11], даже прочные породы, с пределом прочности на одноосное сжатие $\sigma_{сж} = 8 \cdot 10^3 \div 12 \cdot 10^3$ *Па*, проявляют существенную нелинейность связи между напряжениями и деформациями уже при весьма небольших значениях действующих напряжений [2, 3, 11].

Определение параметров полей напряжений вокруг выработок с учетом всех особенностей деформирования пород представляет собой весьма и весьма сложную задачу в математическом отношении [3, 7, 8, 14]. В связи с этим, рассматривая свойства реальных массивов пород, устанавливают основные особенности их деформирования и в зависимости от этого применяют [2, 8] модель упругой, упругопластической и вязко-упругопластической среды. Для массивов с высокими пределами прочности пород и высокими значениями упругих характеристик – модуля упругости E и коэффициента поперечных деформаций ν (коэффициента Пуассона) – как правило, достаточная точность расчетов обеспечивается при наделении пород свойствами идеально-упругой среды.

С другой стороны, применение идеально-упругой модели для определения параметров полей напряжений и деформаций, формирующихся сразу же после образования выработок, закономерно и для массивов, сложенных менее прочными и менее упругими породами, поскольку скорость перераспределения напряжений и деформаций, как уже указывалось, весьма велики и поэтому пластические и вязкие свойства массива в первые моменты времени практически не успевают реализоваться. Вследствие этого упругие решения можно рассматривать как верхний предел возможных значений напряжений в реальных условиях.

Учитывая вышесказанные соображения рассмотрим задачу о напряженно-деформированном состоянии (НДС) массива горных пород вокруг вертикальной выработки кругового поперечного сечения. Будем исходить из точной постановки трехмерной задачи о деформации полупространства, ослабленной глубокой цилиндрической полостью. При этом будем считать, что НДС полупространства, как трехмерного тела, строго подчиняется основным требованиям трехмерной линейной теории упругости и описывается её соответствующими уравнениями и соотношениями.

Постановка общей задачи. Основные уравнения и соотношения.

Для решения задачи отнесем пространства вокруг выработки к цилиндрической системе координат (r, θ, z), начало которой расположено на дневной поверхности массива, а ось z совпадает с осью выемки и направлена вниз (Рис.1). Будем обозначать через

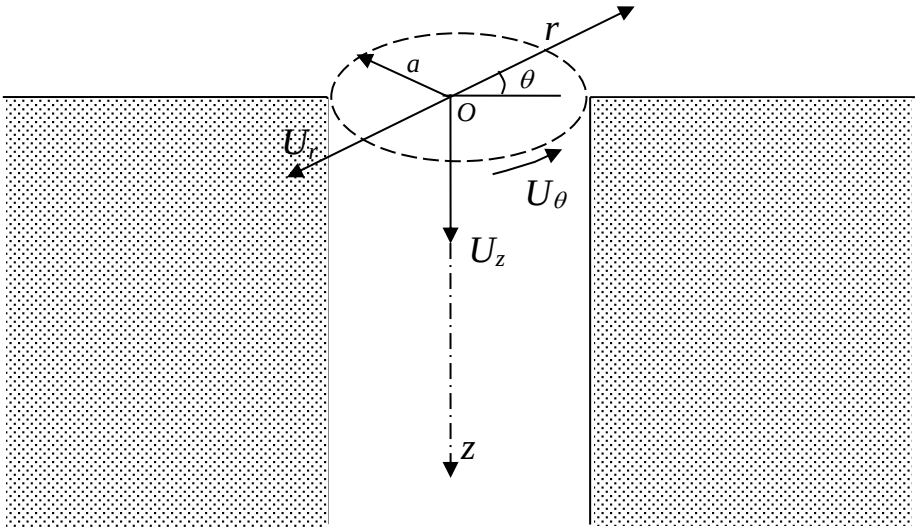

Рис.1. Схема области исследования.

U_r, U_θ, U_z перемещения точек массива в направлении осей r, θ, z; через ε_{rr}, $\varepsilon_{\theta\theta}$, ε_{zz}, ε_{rz}, $\varepsilon_{r\theta}$, $\varepsilon_{\theta z}$ – компоненты тензора деформаций в координатной системе (r, θ, z) и через σ_{rr}, $\sigma_{\theta\theta}$, σ_{zz}, σ_{rz}, $\sigma_{r\theta}$, $\sigma_{\theta z}$ компоненты тензора напряжений в той же системе координат.

Для определения всех компонент тензора напряжений и вектора перемещений в задаче, т.е. для решения сформулированной задачи необходимо будет проинтегрировать трехмерные уравнения упругого равновесия без учета объемных сил:

$$\sigma_{ij,j} = 0, \quad (i, j = r, \theta, z). \tag{1}$$

Из множества форм записи этих уравнений выберем уравнения статики при отсутствии объемных сил в форме Ламэ [5]:

$$\nabla^2 U_r + \frac{1}{1-rv}\frac{\partial \varepsilon}{\partial r} + \frac{2}{r^2}\frac{\partial U_\theta}{\partial \theta} - \frac{U_r}{r^2} = 0,$$
$$\nabla^2 U_\theta + \frac{1}{1-rv}\cdot\frac{1}{r}\frac{\partial \varepsilon}{\partial \theta} + \frac{2}{r^2}\frac{\partial U_r}{\partial \theta} - \frac{U_\theta}{r^2} = 0, \tag{2}$$
$$\nabla^2 U_z + \frac{1}{1-rv}\frac{\partial \varepsilon}{\partial z} = 0, \quad 0 \le z < \infty, \quad a \le r < \infty,$$

где

$$\nabla^2 = \frac{1}{r}\frac{\partial}{\partial r}\left(r\frac{\partial}{\partial r}\right) + \frac{1}{r^2}\frac{\partial^2}{\partial \theta^2} + \frac{\partial^2}{\partial z^2}. \tag{3}$$

- оператор Лапласа в цилиндрической системе координат (r, θ, z); $\varepsilon = \varepsilon_{rr} + \varepsilon_{\theta\theta} + \varepsilon_{zz}$ – объемное расширение; v – коэффициент Пуассона; a - радиус выработки.

Использование уравнений равновесия будет значительно проще, если учесть, что компоненты вектора вращения – ω_r, ω_θ, ω_z связаны с перемещениями U_r, U_z, U_θ следующими формулами.

$$\omega_r = \frac{1}{2}\left(\frac{1}{2}\frac{\partial U_z}{\partial \theta} - \frac{\partial U_\theta}{\partial z}\right), \quad \omega_\theta = \frac{1}{2}\left(\frac{\partial U_r}{\partial z} - \frac{\partial U_z}{\partial r}\right), \quad \omega_z = \frac{1}{2}\left[\frac{\partial (rU_\theta)}{\partial r} - \frac{\partial U_r}{\partial \theta}\right]. \tag{4}$$

Преобразовав уравнения равновесия (2) с учетом (4) приходим к следующим более удобной форме

$$\frac{\partial \varepsilon}{\partial r} - \frac{2\mu}{\lambda + 2\mu}\left(\frac{1}{r}\frac{\partial \omega_z}{\partial \theta} - \frac{\partial \omega_\theta}{\partial z}\right) = 0,$$
$$\frac{\partial \varepsilon}{\partial \theta} - \frac{2\mu r}{\lambda + 2\mu}\left(\frac{\partial \omega_r}{\partial z} - \frac{\partial \omega_z}{\partial r}\right) = 0,$$
$$\frac{\partial \varepsilon}{\partial z} - \frac{2\mu}{r(\lambda + 2\mu)}\left(\frac{\partial (r\omega_\theta)}{\partial r} - \frac{\partial \omega_z}{\partial \theta}\right) = 0, \tag{5}$$

где $\lambda = \dfrac{Ev}{(1+v)(1-2v)}$; $\mu = \dfrac{E}{2(1+v)}$ – коэффициенты Ламэ; E – модуль упругости (Юнга).

При этом объемная деформация – ε через перемещения U_r, U_θ, U_z выражается следующим образом:

$$\varepsilon = \frac{\partial U_r}{\partial r} + \frac{U_r}{r} + \frac{1}{r}\frac{\partial U_\theta}{\partial \theta} + \frac{\partial U_z}{\partial z}.$$

Поскольку рассматривается задача о деформации полупространства, ослабленного

бесконечно глубокой цилиндрической выработкой кругового поперечного сечения, трехмерная задача может быть сведена к двухмерной, как осесимметричная. Для этого предполагается, что нагрузка, действующая на массив выработки, распределена симметрично относительно оси *0z*. Тогда, перемещения точек массива также распределяются симметрично, т.е. они не зависят от угловой координаты θ.

$$U_r = U_r(r,z);\ U_\theta = U_\theta(r,z);\ U_z = U_z(r,z).$$

В этом случае уравнения равновесия (5) значительно упрощаются и принимают вид

$$\begin{aligned} &\frac{\partial \varepsilon}{\partial r} + \frac{1-2\nu}{1-\nu}\frac{\partial \omega}{\partial z} = 0, \\ &\frac{\partial}{\partial r}\left[\frac{1}{r}\frac{\partial (rU_\theta)}{\partial r}\right] + \frac{\partial^2 U_\theta}{\partial z^2} = 0, \\ &\frac{\partial \varepsilon}{\partial z} - \frac{1}{r}\frac{1-2\nu}{1-\nu}\frac{\partial (rw)}{\partial r} = 0. \end{aligned} \qquad (6)$$

При этом

$$\varepsilon = \frac{\partial U_r}{\partial r} + \frac{U_r}{r} + \frac{\partial U_z}{\partial z};\ \ \omega = \omega_\theta;\ \ \omega_r = \omega_z = 0.$$

В полученных уравнениях перемещение U_θ входит только во второе уравнение, а перемещения U_r и U_z входит только в первое и третье уравнениями. Поэтому можно отделить задачу определения перемещения U_θ от задачи определения перемещений U_r и U_z. Первая задача соответствует кручению цилиндрического слоя, имеющего конечную толщину, вторая – случаю деформированного состояния рассматриваемого массива пород, называемого осесимметричной задачей. Таким образом приходим к выводу, что в дальнейшим для решения задачи достаточно проинтегрировать уравнения

$$\frac{\partial \varepsilon}{\partial r} + \nu^* \frac{\partial \omega}{\partial z} = 0;\quad \frac{\partial \varepsilon}{\partial z} - \frac{\nu^*}{r}\frac{\partial (r\omega)}{\partial r} = 0, \qquad (7)$$

где

$$\nu^* = (1-2\nu)/(1-\nu).$$

Представление решения задачи.

Решение системы (7) может быть получено различными способами. Например, можно свести к отысканию некоторых, вводимых определенным образом, вспомогательных функций – функций напряжений [5, 10, 15, 16], выразив предварительно перемещения и все компонента тензора напряжений через эти функции. Такие функции, являющимся решением осесимметричной задачи были введены различными авторами по – разному, исходя из направленности рассматриваемых задач.

Рассматриваемая нами задача о деформировании полупространства, ослабленной глубокой выработкой ориентирована на решение конкретной задачи механики горных пород. Поэтому, естественно предположить о том, что рассматриваемый массив горных пород работает только на сжатие. В этом случае изменения радиального перемещения должны носит. Исходя из указанных соображений, следуя процедуре работы [10, 17], но с некоторым отличием от неё, отвечающим сущности рассматриваемой конкретной задачи, введем первую из функций напряжений следующим образом:

$$\frac{\partial \phi}{\partial z} = -\frac{\mu\, r}{1-\nu}\omega;\ \ \frac{\partial \phi}{\partial r} = -\frac{r(\lambda+2\mu)}{2(1-\nu)}\varepsilon, \qquad (8)$$

где $\varphi(r,z) = \varphi$ – некоторая функция переменных *r* и *z*.

Подставив выражения ε и ω во второе уравнение (7) убеждаемся, что оно выполняется тождественно. Подставив (8) в первое уравнение (7) получим

$$\frac{1}{r}\frac{\partial^2 \varphi}{\partial r^2} - \frac{1}{r^2}\frac{\partial \varphi}{\partial r} + \frac{1}{r}\frac{\partial^2 \varphi}{\partial z^2} = 0$$

или

$$\nabla^2 \varphi = 0, \qquad (9)$$

где

$$\nabla^2 = \frac{\partial^2}{\partial r^2} - \frac{1}{r}\frac{\partial}{\partial r} + \frac{\partial^2}{\partial z^2}.$$

Следовательно, уравнения равновесия в перемещениях выполняются, если задавать ε и ω в виде

$$\omega = -\frac{1-\nu}{\mu\, r}\frac{\partial \phi}{\partial z};\ \ \varepsilon = -\frac{2(1-\nu)}{r(\lambda+2\mu)}\frac{\partial \phi}{\partial r}$$

и если функция $\varphi = \varphi(r,z)$ определяется как решение уравнения (9).

Используя выражения для объемной деформации и вращения – (6) и (4) вышеприведенные выражения ε и ω через $\varphi(r,z)$ перепишем в следующей форме

$$\begin{aligned} &\frac{1}{r}\frac{\partial (rU_r)}{\partial r} + \frac{\partial U_z}{\partial z} = -\frac{2(1-\nu)}{(\lambda+2\mu)}\frac{\partial \varphi}{\partial r}, \\ &\frac{\partial U_r}{\partial z} - \frac{\partial U_z}{\partial r} = -\frac{2(1-\nu)}{\mu}\frac{1}{r}\frac{\partial \varphi}{\partial z}. \end{aligned} \qquad (10)$$

Теперь введем новую вспомогательную функцию $\phi(r,z)$ следующим образом:

$$\begin{aligned} &\frac{\partial \phi}{\partial r} = -\lambda\frac{\partial (rU_r)}{\partial r} + r(\lambda+2\mu)\frac{\partial U_z}{\partial z}, \\ &\frac{\partial \phi}{\partial z} = \mu\, r\left(\frac{\partial U_r}{\partial z} + \frac{\partial U_z}{\partial r}\right). \end{aligned} \qquad (11)$$

Вычитая из первого уравнения (10) первое уравнение (11), поделенное на $\lambda + 2\mu$, и поделив

на μ второе уравнение (11) и складывая со вторым уравнением (10), получим

$$\frac{\partial(rU_r)}{\partial r} = \frac{1}{2\mu}\frac{\partial}{\partial r}[\phi - 2(1-\nu)\varphi],$$
$$\frac{\partial(rU_r)}{\partial z} = \frac{1}{2\mu}\frac{\partial}{\partial z}[\phi - 2(1-\nu)\varphi]. \quad (12)$$

Проинтегрировав эти уравнения убеждаемся, что связь между радиальными перемещениями U_r и введенными функциями напряжений φ и ϕ имеет вид

$$U_r = \frac{1}{2\mu\, r}[\phi - 2(1-\nu)\varphi]. \quad (13)$$

Из курса теории упругости [1, 5] известно, что перемещение U_r в осесимметричной задаче должно удовлетворить уравнению

$$\left(\nabla^2 - \frac{1}{r^2}\right)^2 U_r = 0. \quad (14)$$

Подставив в (14) выражение для U_r - (13) и выполнив дифференцирование, и имея при этом в виду (9), получим квазибигарманическое дифференциальное уравнение, определяющее функцию напряжений ϕ

$$\nabla^4\phi = 0, \quad (15)$$

где $\nabla^4 = \nabla^2\nabla^2 = \left(\nabla^2\right)^2$ – квазибигармонический оператор. Отсюда следует, что введенная функция напряжений ϕ должна быть квазибигармонической.

Подставив в (11) значения перемещений U_r через функции ϕ и φ – (13), для производных по координатам *r* и *z* продольного перемещения U_z получим

$$\frac{\partial U_z}{\partial r} = \frac{1}{\mu\, r}\frac{\partial\phi}{\partial z} - \frac{1}{2\mu\, r}\frac{\partial}{\partial z}[\phi - 2(1-\nu)\varphi],$$
$$\frac{\partial U_z}{\partial z} = \frac{1}{(\lambda+2\mu)r}\frac{\partial\phi}{\partial r} - \frac{\lambda}{2\mu\, r(\lambda+2\mu)}\frac{\partial}{\partial r}[\phi - 2(1-\nu)\varphi].$$

Отсюда, учитывая следующие равенства, имеющие места между упругими постоянными

$$\nu^* = \frac{1-2\nu}{1-\nu} = \frac{2\mu}{\lambda+2\mu}, \qquad \frac{\nu}{1-\nu} = \frac{\lambda}{\lambda+2\mu},$$

получим окончательно

$$\frac{\partial U_z}{\partial r} = \frac{1}{2\mu\, r}\frac{\partial}{\partial z}[\phi + 2(1-\nu)\varphi],$$
$$\frac{\partial U_z}{\partial z} = -\frac{1}{2\mu\, r}\frac{\partial}{\partial r}(\phi - 2\nu\varphi). \quad (13)_1.$$

Как известно [4, 13] условием интегрируемости этих уравнений является равенство

$$\frac{\partial}{\partial z}\left(\frac{\partial U_z}{\partial r}\right) = \frac{\partial}{\partial r}\left(\frac{\partial U_z}{\partial z}\right),$$

подставив в которое, значения производных перемещения U_z с учетом уравнения (9), получим

$$\nabla^2\phi = -2\frac{\partial^2\varphi}{\partial z^2}.$$

Последнее уравнение является условием интегрируемости вышеприведенных уравнений относительно производных $\partial U_z/\partial r$ и $\partial U_z/\partial z$. Это условие будет выполнено, если задавать функцию ϕ в виде

$$\phi = \psi + r\frac{\partial\varphi}{\partial r}, \quad (16)$$

где $\psi = \psi(r,z)$ - функция координат *r* и *z*, удовлетворяющая дифференциальному уравнению

$$\nabla^2\psi = 0. \quad (17)$$

Отсюда следует, что таким образом, функция напряжений ϕ представлена в форме (16). Выгодность представления (16) заключается в более правильном описании процесса деформации вокруг стволов вертикальных шахт кругового сечения.

Имеется другой способ выбора функции напряжений ϕ, приведенный в работе [10]. По нему, функцию ϕ, можно представить в виде

$$\phi = \psi + z\frac{\partial\varphi}{\partial z}. \quad (18)$$

Следует заметить, что последнее представление ϕ удобно использовать в задачах, требующих точного выполнения условий только на гранях *z* = *const*, т.е. при деформации тел типа слоя или полупространства.

В тех же случаях, когда определяющую роль играют условия на цилиндрических поверхностях, как это имеет место в рассматриваемой нами задаче, необходима использовать формулу (16). При необходимости выполнения граничных условий на взаимно ортогональных поверхностях *z* = *const* и *r* = *const*, следует применять оба варианта общего решения осесимметричной задачи.

В заключении раздела заметим, что следующим этапом решения общей задачи является представление всех отличных от нуля компонент тензоров деформаций и напряжений, с учетом осесимметричности рассматриваемой задачи.

Представление деформаций и напряжений через функции напряжения.

Воспользовавшись выражениями, связывающими составляющие тензора деформации с перемещениями в цилиндрической системе координат (r,θ,z) и при принятых предположениях относительно перемещений, т.е. при

$$U_r = U_r(r,z),\ U_\theta = 0,\ U_z = U_z(r,z),$$

имеем [10]:

$$\varepsilon_{rr} = \frac{\partial U_r}{\partial r};\ \varepsilon_{v\theta} = \frac{U_r}{r};\ \varepsilon_{zz} = \frac{\partial U_z}{\partial z};$$

$$\varepsilon_{rz} = \frac{1}{2}\left(\frac{\partial U_r}{\partial z} + \frac{\partial U_z}{\partial r}\right);\ \varepsilon_{r\theta} = \varepsilon_{\theta z} = 0.$$

Вводя в эти равенства вместо перемещений U_r и U_z функции ϕ и φ в соответствии с выражениями (13) и выражениями для производных перемещения U_z по координатам *r* и *z* , получим

$$\varepsilon_{rr} = \frac{1}{2\mu}\cdot\frac{\partial}{\partial r}\frac{\varphi - 2(1-v)\phi}{r};\qquad \varepsilon_{rz} = \frac{1}{2\mu}\frac{1}{r}\frac{\partial\varphi}{\partial z};$$

$$\varepsilon_{zz} = -\frac{1}{2\mu}\frac{1}{r}\frac{\partial}{\partial r}(\varphi - 2v\phi);\qquad \varepsilon_{\theta\theta} = \frac{1}{2\mu}\frac{1}{r^2}[\varphi - 2(1-v)\phi]. \tag{19}$$

Для нахождения компонентов напряжения используем закон Гука для изотропного тела с учетом осесимметричности задачи [1]

$$\sigma_{rr} = \lambda\varepsilon + 2\mu\ \varepsilon_{rr};\qquad \sigma_{\theta\theta} = \lambda\varepsilon + 2\mu\ \varepsilon_{\theta\theta};$$

$$\sigma_{zz} = \lambda\varepsilon + 2\mu\ \varepsilon_{zz};\qquad \sigma_{rz} = 2\mu\ \varepsilon_{rz}.$$

при этом

$$\sigma_{r\theta} = 2\mu\,\varepsilon_{r\theta} = 0;\qquad \sigma_{z\theta} = 2\mu\,\varepsilon_{z\theta} = 0;$$

$$\varepsilon = \varepsilon_{rr} + \varepsilon_{\theta\theta} + \varepsilon_{zz} = -\frac{2(1-v)}{\lambda + 2\mu}\cdot\frac{1}{r}\frac{\partial\varphi}{\partial r} = -\frac{1-2v}{\mu}\frac{\partial\varphi}{\partial r}. \tag{20}$$

Подставив в последние выражения закона Гука значения деформаций по формулам (19) и выражение для объемного расширения (20), получим

$$\sigma_{rr} = \frac{1}{r}\frac{\partial\phi}{\partial r} - \frac{1}{r^2}\phi + \frac{2(1-v)}{r^2}\varphi - \frac{2}{r}\frac{\partial\varphi}{\partial r} = \frac{1}{r}\frac{\partial\phi}{\partial r} - \frac{1}{r^2}[\phi - 2(1-v)\varphi] - \frac{2}{r}\frac{\partial\varphi}{\partial r};$$

$$\sigma_{zz} = -\frac{1}{r}\frac{\partial\phi}{\partial r};\quad \sigma_{rz} = \frac{1}{r}\frac{\partial\phi}{\partial z};\qquad \sigma_{\theta\theta} = \frac{1}{r^2}[\phi - 2(1-v)\varphi] - \frac{2v}{r}\frac{\partial\varphi}{\partial r}. \tag{21}$$

Таким образом все четыре составляющие тензора напряжений – нормальные σ_{rr}, σ_{zz}, $\sigma_{\theta\theta}$ и касательное σ_{rz}, а также ненулевые компоненты вектора перемещений – радиальное U_r и продольное U_z выражены через введенные функции напряжений ϕ и φ.

Для сокращения записей можно ввести следующее обозначение [12]:

$$\overline{\psi} = \frac{1}{r^2}[\phi - 2\psi - 2(1-v)\varphi]. \tag{22}$$

С учетом (22) первое уравнение (21) преобразуем следующим образом:

$$\sigma_{rr} = \frac{1}{r}\frac{\partial\varphi}{\partial r} - \frac{1}{r^2}[\varphi - 2(1-v)\phi] - \frac{2}{r}\frac{\partial\phi}{\partial r} = \frac{1}{r}\frac{\partial\varphi}{\partial r} - \frac{1}{r^2}[\varphi - 2(1-v)\phi - 2\psi + 2\varphi + 2\psi - 2\varphi] -$$

$$-\frac{2}{r}\frac{\partial\phi}{\partial r} = \frac{1}{r}\frac{\partial\varphi}{\partial r} - \frac{1}{r^2}[3\varphi - 2\psi - 2(1-v)\phi] + \frac{2}{r^2}\left[\varphi - \left(\psi + r\frac{\partial\phi}{\partial r}\right)\right].$$

Отсюда с учетом (2) и (16) следует, что

$$\sigma_{rr} = \frac{1}{r}\frac{\partial\phi}{\partial r} - \overline{\psi};$$

аналогично

$$\sigma_{\theta\theta} = \psi - \frac{2(1+\nu)}{r}\frac{\partial\phi}{\partial r};\ \ \sigma_{zz} = -\frac{1}{r}\frac{\partial\varphi}{\partial r};\ \ \sigma_{rz} = \frac{1}{r}\frac{\partial\varphi}{\partial z}. \qquad (23)$$

Выводы.

Таким образом, решена конкретная задача механики горных пород, т.е. рассматриваемый массив горных пород работает только на сжатие. Процесс деформации и напряженное состояние вокруг стволов вертикальных шахт кругового сечения выражена через функции напряжения. Компоненты деформации и напряженного состояния вокруг стволов вертикальных шахт кругового сечения выражены через функции напряжения. Получены формулы, позволяющие однозначно определить НДС полупространства с глубокой цилиндрической полостью кругового сечения, если найдены решения квазигармонических уравнений $\nabla^2\phi = 0,\ \ \nabla^2\psi = 0$ при соответствующих граничных условиях, заданных на цилиндрической поверхности полости, и моделирующих задачу о НДС массива горных пород, вокруг вертикальной выработки кругового поперечного сечения.

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PROBLEMS OF THE USE OF DIGITAL TECHNOLOGIES IN INDUSTRY IN THE CONTEXT OF INCREASING THE EXPORT POTENTIAL OF THE COUNTRY

Abstract: *The aim of this research work is to conduct a systematic analysis of the use of advanced digital technologies in the industrial production process. The economic indicators of the main foreign trade partners of the Republic of Uzbekistan in the structure of the global innovation rating (Global Innovation Index) have been studied in detail from the standpoint of the use of digital technologies. Based on the use of methods of system analysis and comparison, statistical groupings and rating, the authors put forward a concept for the development of high-tech industrial production focused on increasing the export potential of Uzbekistan.*

Key words: *ADP technologies, Global Innovation Index, Inclusive and sustainable industrial development, ISID, frontrunners, followers, latecomers, laggards.*

Language: *English*

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Introduction

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In recent times, the concept of "digital economy" has been used many times. Indeed, in many developed countries, the digital economy has had a significant impact on their development factors. The digital economy plays an important role in the life of society

The rapid development of digital technologies is leading to huge changes not only in the economy but also in society as a whole. Digital technologies allow for a sharp increase in labor productivity, while reducing transaction costs for the state, legal entities and individuals.

Adoption of new innovative technologies is the main driving force for the success of Inclusive and Sustainable Industrial Development (ISID). Digital manufacturing technologies include artificial intelligence, big data analytics, cloud computing, the Internet of Things (IoT), advanced robotics, and complementary manufacturing. addictive manufacturing) is changing industrial production

(transformation)[1, p.1]. In particular, the convergence of automation and advanced digital technologies is expected to lead to the full development of cyber-physical systems and the growth of intelligent manufacturing[2, p.1]. Under the right conditions, developing countries can adapt to ISID by adopting these advanced digital technologies and ensure the success of the Sustainable Development Goals (SDGs)[3, p.2].

Literature review.

UNIDO, Industrial development report 2020 (2020) highlights the impact of ADP technologies on developing countries, the development of a "one size fits all" policy strategy for inclusive and sustainable industrial development of new technologies.

Abdikeev N. M., Bogachev Yu. S., Bekulova S. R. (2019) analyzed the mechanisms of institutional support for innovative activities aimed at addressing the strategic objectives of scientific and technological achievements in the economy of the Russian Federation in the context of the digital economy.

Szalavetz A. (2019) explores the issues of changing the order of modernization of production subsidiaries operating on direct investment investments with advanced production technologies in the factory economy.

Agafonov F. (2017) studied the convergent and technological changes in the economy of natural resources to increase profitability, investment attractiveness and international competitiveness of industrial production.

Bryndin E. (2019) has extensively covered the concepts of "creative activity", "creative skills", and "creative education".

Litvinenko V. S. (2020) studied the impact of the global digital economy on the technological development of the global mineral industry.

Kurpayanidi K. (2020) some issues of formation of a modern competitive national innovation system in the Republic of Uzbekistan are analyzed.

Muminova E. (2020) studied blockchain technology, digitization efficiency and basic principles of digitization and a set of blocks that require material resources to develop the national digital economy.

Ilyosov A. (2020) highlights some of the challenges in digital manufacturing and industrial product exports in the context of the digital economy.

Research methodology. Comparative-gradual analysis, statistical-mathematical, statistical grouping, rating, index, historical comparison and other methods were used during the research.

Analysis and discussion of results.

In the Industrial Development Report, countries are divided into four groups according to the level of use of ADP technologies used in production (frontrunners, followers, latecomers, laggards), including two groups of producers (as producers) and users (as users) (Table 1).

The frontrunners are the 10 countries with the highest average number of applications in the global patent system. These countries also have an above-average share in the market of exports and imports of goods related to ADP technologies[4, p.2].

All other categories are grouped by six indicators: patent orders (regular and global patent families), share in international trade (exports and imports), and relative dominance in international trade (exports and imports). For each indicator, the country's leading economies are analyzed and compared to the world average[5, p.3].

Followers are countries that have recorded above-average rates of applications to regular and global patent families for innovation. Once the frontrunners are identified, these average values are 10 and 20, respectively. Those with below-average but above-zero performance are considered late innovators[6, p.2].

For export and import activities, not only market share but also the degree of specialization in the sale of basic goods is taken into account as followers (relative advantage is higher than 1). The average share of the world market is 0.18% for exports and 0.29% for imports. Delays, in turn, should not be on both indicators at the same time, or the market share should be above average or relatively specialized in sales of basic goods[7, p.3].

All other countries are laggards.

Although the creation and distribution of ADP technologies is concentrated globally, some developing countries are taking the first steps towards applying these technologies. The 10 countries that are considered Frontrunners own 90% of patents and 70% of exports related to these technologies. Followers, that is 40 countries, are actively engaged in these technologies, but with very low intensity [8, p.52].

Table 1 - List of countries by level of use of ADP technologies used in production [8, p.192]

Frontrunners (10)	Followers (40)		Latecomers (29)		Laggards (88)
	As producers (23)	As users (17)	As producers (16)	As users (13)	
China (1)	Australia	Algeria	Bosnia and Herzegovina	Costa Rica	All other economies that, according to the United
France	Austria	Argentina	Bulgaria	Cotte d'Ivoire	
Germany (7)	Belgium	Bangladesh	Chile	Ecuador	
Japan	Brazil	Belarus	Dominican	Egypt	

Republic of Korea (4	Canada	Colombia	Estonia	El Salvador	Nations Statistical Division, had more than 500,000 inhabitants in 2017
The Netherlands	Croatia	Hungary	Greece	Ethiopia	
Switzerland	Czech Republic	Indonesia	Kyrgyzstan (6)	Malawi	
Taiwan (China)	Denmark	Eron	Latvia	Serbia	
United Kingdom	Finland	Malaysia	Moldova	Tunisia	
United States	Hong Kong (China)	Mexico	New Zealand	Turkmenistan (10)	
	India	Portugal	Nigeria	Uganda	
	Ireland	Romania	Philippines	Uzbekistan	
	Israel	Saudi Arabia	Slovenia	Zambia	
	Italy	South Africa	Ukraine		
	Lithuania	Thailand	BAA		
	Luxembourg	Turkey (5)	Venezuela		
	Norway	Vietnam			
	Poland				
	Russian Federation (2)				
	Singapore				
	Slovakia				
	Spain				
	Sweden				

As can be seen from the table above, our country is listed in the column of users of "Latecomers". Therefore, it is expedient to further increase the export of industrial products in our country, increase product quality and competitiveness, further develop innovative and patent-related activities in industry.

According to the technological structure of production in 2018-2019, the share of high-tech industry in the industry will be only 1.6% in 2019 (1.4% in 2018), medium-high-tech 25.3% (27.8% in 2018), medium - 37.5% with low technology (32.1% in 2018) and 35.5% with low technology (38.7% in 2018) [9, p.4]. The share of the high-tech sector in the Russian Federation does not exceed 6.7%, and in the innovation sector - 11.7%. Technological systems 5 and 6 make up the bulk of the production capacity of developed countries. According to Academician Glazev, in the United States, the 5th and 6th technological systems account for 60% and 5%, respectively, while in Russia they are only 10% and 0.5% [10, p.5].

In our country, measures are being taken to increase the production and export potential of industrial products through the development of advanced digital technologies. In the first six months of 2020, the country's foreign trade turnover (TSA) amounted to 15855.8 mln. USD, which is 3528.0 mln. USD or 18.2% less than in the same period of 2019. The volume of exports within the TSA amounted to 6285.4 mln. USD (decreased by 22.6%) and the volume of imports amounted to 9570.4 mln. USD (decreased by 15.0%) [11, p.1]. The data shows that the country has a passive foreign trade balance.

Let's analyze the countries with the highest foreign trade turnover with our country and their place in the ranking of the Global Innovation Index (GII). The GII ranking takes into account dozens of parameters: the number of patent applications, the cost of developing and implementing innovations, and more. According to the results of this ranking in 2020, our country ranked 93rd out of 131 countries. So what is the situation with our main foreign trade partners? Let's look at Table 2 below.

Table 2 - Countries with the highest foreign trade turnover with the Republic of Uzbekistan, their level of use of ADP technologies and their place in the GII ranking

(January-June 2020, million USD, in %)

№	Top 10 Countries	Foreign trade turnover	Export	Import	Share, in %	Level of use of ADP technologies	GII rank[1]
	China	2 875,1	830,3	2 044,9	18,1	Frontrunner	14
	Russian Federation	2 592,0	663,9	1 928,1	16,3	Follower	47

[1] https://www.wipo.int/global_innovation_index/en/2020/

	Kazakhstan	1 336,5	412,0	924,5	8,4	-	77
	Republic of Korea	1 130,9	21,0	1 109,9	7,1	Frontrunner	10
	Turkey	886,6	428,4	458,2	5,6	Follower	51
	Kyrgyzstan	395,2	338,3	56,9	2,5	Latecomer	94
	Germany	337,0	31,8	305,2	2,1	Frontrunner	9
	Afghanistan	333,0	331,7	1,2	2,1	-	-
	Tajikistan	224,0	182,9	41,2	1,4	-	109
	Turkmenistan	214,2	56,0	158,2	1,4	Latecomer	-

As can be seen from the table, our main foreign trade partners are China, the Republic of Korea and Germany, which are among the frontrunners group, and these countries are also among the top 20 countries in the GII rankings. It can be said that there is a close connection between the development of the use of ADP technologies and innovative development.

It is known that according to the Decree of the President of the Republic of Uzbekistan dated September 21, 2018 "On approval of the Strategy of Innovative Development of the Republic of Uzbekistan in 2019-2021" PF-5544, the task is to include our country in the GII ranking of 50 advanced countries by 2030[11, p.2].

Also, in accordance with the Decree of the President of the Republic of Uzbekistan dated October 5, 2020 "On approval of the Strategy" Digital Uzbekistan - 2030 "and measures for its effective implementation" PF-6079, two programs were approved:

• Digital transformation of regions in 2020-2022;

• Digital transformation of networks in 2020-2022.

On the basis of these programs in the framework of digital transformation of regions and networks in 2020-2022:

- the level of Internet access in settlements will be increased from 78% to 95% through the expansion of broadband ports to 2.5 million, the construction of 20,000 km of fiber-optic lines and the development of mobile networks;
- more than 400 information systems, electronic services and other software products will be introduced in various areas of socio-economic development of the regions;
- Training in the basics of computer programming will be organized for 587 thousand people, including 500 thousand young people under the "One Million Programmers" project;
- more than 280 information systems and software products for automation of management, production and logistics processes will be introduced at enterprises in the real sector of the economy;
- Relevant higher education institutions will be attached to the regions to improve the digital literacy and skills of governors, employees of government agencies and organizations, to train them in information technology and information security, and 12,000 of them will be trained in the field of information technology.

A number of tasks have also been set for the development of the digital industry. They are:

From November 1, 2020, Uzbekistan will provide training in information technology, development and implementation of hardware and software, export of information services via robotics, the Internet, as well as data storage and processing. Legal entities that are residents of the Republic will be able to receive.

By January 1, 2022, the digital transformation of commercial banks will be completed by providing a wide range of online services, including the sale of remote credit products, opening deposits and accounts.

Conclusion and suggestions.

In conclusion, the development of production and export of high-tech industrial products is an important step towards the application of new technologies presented in the concept of Industry 4.0. This includes digitizing not only physical models of complex products, but also production processes, systems, sources, and other elements that are part of the product life cycle. This is the only way for manufacturing companies to respond to future technological challenges and increase efficiency in modern business. One of the important reasons for the digitalization of production is to establish effective communication between professionals who are responsible for solving common problems and successfully achieving common goals. This is primarily due to the optimization of products and processes, which leads to a significant reduction in production costs. In this situation, it is expedient for us to focus on the following in order to develop export activity in the country and improve our position in the GII ranking:

- Production of high-quality, innovative and competitive industrial products based on digital technologies in accordance with the requirements of foreign markets;
- search for new export markets through the development of digital platforms and in-depth marketing research in foreign markets;
- Development of a digital cluster system specializing in the export of modern industrial products;

- Increasing the export potential of the regions by connecting local industrial exporters through a digital cluster system, etc.

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STRESS MODELLING ON THE PLUNGER AT OPERATION OF THE HOLES MINING N-NEWTON OIL

Abstract: *In paper mathematical modelling of pressure on a plunger is considered at operation of oil wells with deep pumps. By numerical experiments study influence of viscoelastic properties, viscosities and an oil denseness on a total pressure variation on a plunger.*

Key words: *pressure on a plunger, a viscoelastic and viscous liquid, a pre-image and a Laplace transform.*
Language: *Russian*
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МОДЕЛИРОВАНИЕ ДАВЛЕНИЯ НА ПЛУНЖЕР ПРИ ЭКСПЛУАТАЦИИ СКВАЖИН, ДОБЫВАЮЩИХ НЕНЬЮТОНОВСКИЕ НЕФТИ

Аннотация: *В статье рассматривается математическое моделирование давления на плунжер при эксплуатации нефтяных скважин с глубинными насосами. Численными экспериментами изучено влияние вязкоупругих свойств, нефти и плотности нефти на изменение полного давления на плунжер.*

Ключевые слова: *давление на плунжер, вязкоупругая и вязкая жидкость, оригинал и изображение.*

Введение

Эксплуатация нефтяных скважин штанговыми глубинными насосами является самым распространенным способом механизированной добычи нефти. При работе глубинного насоса плунжер испытывает давление, создаваемое силой тяжести столба жидкости в подъемных трубах. В настоящей работе предлагается теоретический способ определения полного давления на плунжер с учетом вязкоупругих свойств добываемой нефти [1-3]. Рассмотрено влияние релаксационных свойств жидкости на изменение давления на плунжер.

Постановка задачи.

Рассмотрим задачу определения полного давления на плунжер при ходе его вверх в подъемной трубе, при эксплуатации нефтяных скважин плунжерным лифтом. Для математического моделирования процесса

принимаем общепринятые допущения относительно движения жидкости(нефти) в кольцевом пространстве между двумя цилиндрическими трубами, одна из которых движется относительно другой. Схема распределения скоростей жидкости в кольцевом пространстве между колонной труб и штанг относительно неподвижной системы показана на рис. 1.

Изменение давления на плунжер обусловлено инерцией жидкости, а полное давление на плунжер $p(t)$ будет[4]

$$p(t) = \Delta p(t) + (L-h)\rho g + p_0, \qquad (1)$$

где t – время; $\Delta p(t)$ – потери давления при нестационарном движении жидкости в подъемной трубе кольцевого сечения; p_0 – давление на устье; L – высота поднимаемого столба жидкости; h – глубина погружения глубинного насоса; ρ – плотность жидкости; g – ускорение свободного падения. Следуя работе [4], скорость движения плунжера $v_p(t)$ в период одного цикла T его движения принимается в виде

$$v_p(t) = \frac{24v_0}{\pi^3}\sum_{n=1}^{\infty}\frac{1-(-1)^n}{n^3}\sin\frac{2\pi nt}{T}, \qquad (2)$$

где v_0 – средняя скорость движения точки подвески штанг. Графики зависимости от времени скорости и ускорения плунжера для $T = 20\,s$, $v_0 = 0.60\ m/s$ приведен на рис. 2.

Нефти некоторых месторождений Узбекистана (Коштар, Лялмикар, Амударья, Кокайти и др.) относятся к неньютоновским средам. Структурно-механические свойства этих нефтей, в основном, обусловлено высоким содержанием асфальтено-смолистых и парафинистых веществ. К настоящему времени накоплен достаточно обширный экспериментальный материал по исследованию релаксационных свойств таких нефтей [1-3, 5-7]. Для описания неравновесного и релаксационного поведения этих нефтей наиболее часто используют феноменологические релаксационные модели. В данной работе реологическое уравнение состояния нефти принимается в виде

$$\left(1+\lambda\frac{\partial}{\partial t}\right)\tau(r,t) = \mu\frac{\partial v}{\partial r}, \qquad (3)$$

где r – радиальная координата; v – скорость жидкости; μ – динамическая вязкость; τ – касательное напряжение; λ - время релаксации. Уравнение (3) при $\lambda = 0$ выражает закон вязкого трения Ньютона, а при $\lambda > 0$ - модель вязко-упругой среды Максвелла.

С учетом уравнения движения

$$\rho\frac{\partial v}{\partial t} = \frac{\Delta p}{L} + \frac{1}{r}\frac{\partial}{\partial r}(r\tau),$$

получим дифференциальное уравнение

$$\rho\left(1+\lambda\frac{\partial}{\partial t}\right)\frac{\partial v}{\partial t} = \mu\frac{1}{r}\frac{\partial}{\partial r}\left(r\frac{\partial v}{\partial r}\right) + \left(1+\lambda\frac{\partial}{\partial t}\right)\frac{\Delta p}{L}, \quad (r_2 < r < R), \qquad (4)$$

где r_2 – радиус штанга, R – радиус подъемной трубы.

Для определения потери давления в подъемной трубе $\Delta p(t)$ при нестационарном ламинарном движении жидкости используется уравнение баланса

$$Q = \pi(r_1^2 - r_2^2)v_p(t) = 2\pi\int_{r_2}^{R} rv(r,t)dr, \qquad (5)$$

где r_1 – радиус плунжера, Q – расход жидкости. Начальные и граничные условия для уравнения (4) имеет вид

$$v(r,0) = 0,\ \frac{\partial v(r,0)}{\partial t} = 0,\ (r_2 \le r \le R); \qquad (6)$$

$$v(r_2,t) = v_p(t),\quad v(R,t) = 0,\quad (t > 0). \qquad (7)$$

В практике эксплуатации нефтяных скважин глубинными насосами в большинстве случаях радиальный зазор между трубой и колонной штанг можно рассматривать как плоскую трубу [8-9]. Для такого случая уравнение (4), соотношение (5) и краевые условия (6) - (7) можно написать в следующем виде:

$$\rho\left(1+\lambda\frac{\partial}{\partial t}\right)\frac{\partial v}{\partial t} = \mu\frac{\partial^2 v}{\partial y^2} + \left(1+\lambda\frac{\partial}{\partial z}\right)q(t), \qquad (8)$$

$$Q = \pi(r_1^2 - r_2^2)v_p(t) = 2\pi\int_0^l (y+r_2)v(y,t)dt, \qquad (9)$$

$$v(y,0) = 0,\ v(0,t) = v_0(t),\ v(l,t) = 0, \qquad (10)$$

где $l = R - r_2$, $q(t) = \Delta p(t)/L$. Уравнение (8) и соотношения (9), (10) выражают математическую модель рассматриваемого процесса.

Решение задачи. Отметим, что данная задача для случая вязкой жидкости($\lambda = 0$), приближенным методом Слезкина-Тарга решена в [4], точное решение дано в работе[10]. Рассмотрим решение задачи для вязкоупругой жидкости(нефти).

Введем следующие безразмерные величины:

$$t' = \frac{\mu}{\rho l^2}t,\ x = \frac{y}{l},\ T' = \frac{\mu}{\rho l^2}T,$$

$$\lambda' = \frac{\mu}{\rho l^2}\lambda,\ \bar{v} = \frac{v}{v_0},\ \bar{v}_p = \frac{v_p}{v_0},\ \bar{q} = \frac{l^2}{\mu v_0}q. \qquad (11)$$

С учетом (11) в безразмерных переменных получим уравнение

$$\left(1+\lambda'\frac{\partial}{\partial t'}\right)\frac{\partial \bar{v}}{\partial t'}=\frac{\partial^2 \bar{v}}{\partial x^2}+\left(1+\lambda'\frac{\partial}{\partial t'}\right)\bar{q}(t'), \quad (12)$$

с начальными и граничными условиями

$$\bar{v}(x,0)=0,\ \bar{v}_{t'}(x,0)=0,\quad (0\le x\le 1); \quad (13)$$

$$\bar{v}(0,t')=\bar{v}_p(t'),\ \bar{v}(1,t')=0. \quad (14)$$

Соотношение (9) в безразмерных переменных принимает следующий вид:

$$\frac{r_1^2-r_2^2}{2l^2}\bar{v}_p(t')=\int_0^1\left(x+\frac{r_2}{l}\right)\bar{v}(x,t')dx. \quad (15)$$

Для решения уравнения (12) с краевыми условиями (13)-(14) применим интегральное преобразование Лапласа [11]:

$$\tilde{v}(x,s)=\int_0^{+\infty}e^{-st'}\bar{v}(x,t')dt',$$

$$\tilde{v}_p(s)=\int_0^{+\infty}e^{-st'}\bar{v}_p(t')dt',\ \ \tilde{q}(s)=\int_0^{+\infty}e^{-st'}\bar{q}(t')dt'$$

Тогда получим дифференциальное уравнение

$$\frac{d^2\tilde{v}}{dx^2}-s(1+\lambda' s)\tilde{v}(x,s)=-(1+\lambda' s)\tilde{q}(s),$$

с граничными условиями

$$\tilde{v}(0,\ s)=\tilde{v}_p(s),\ \ \tilde{v}(1,\ s)=0.$$

Решение его имеет вид

$$\tilde{v}(x,s)=\tilde{v}_p(s)\frac{shw(1-x)}{shw}+ \\ +\frac{\tilde{q}(s)}{s}\left(1-\frac{shw(1-x)}{shw}-\frac{shwx}{shw}\right), \quad (16)$$

где $w=\sqrt{s(1+\lambda' s)}$. Подставляя (16) в изображение соотношения (15):

$$\frac{r_1^2-r_2^2}{2l^2}\tilde{v}_p(s)=\int_0^1\left(x+\frac{r_2}{l}\right)\tilde{v}(x,s)dx,$$

и вычисляя интегралы, для $\tilde{q}(s)$ получим формулу

$$\tilde{q}(s)=\frac{l}{l+2r_2}\cdot s\tilde{v}_p(s)\cdot f(w), \quad (17)$$

где

$$f(w)=\frac{\varphi(w)}{\psi(w)},\quad \psi(w)=1-chw+\frac{w}{2}shw,$$

$$\varphi(w)=1-\frac{shw}{w}+\frac{r_2}{l}(1-chw)+\frac{r_1^2-r_2^2}{2l^2}wshw.$$

С целью перехода в оригинал в (17), разложим функцию $f(w)$ в ряд, используя теорему Коши о разложении мероморфной функции на простые дроби [12]:

$$f(w)=\frac{4f_0}{w^2}+4\sum_{k=1}^{\infty}\left[\frac{1}{w^2+a_k{}^2}+\frac{w_k\varphi_k}{\psi_k(w^2+w_k{}^2)}\right]= \\ =\frac{4f_0}{s(1+\lambda' s)}+4\sum_{k=1}^{\infty}\left[\frac{1}{s(1+\lambda' s)+a_k{}^2}+ \right. \\ \left. +\frac{w_k\varphi_k}{\psi_k(s(1+\lambda' s)+w_k{}^2)}\right],$$

где $f_0=\frac{3}{l^2}\left(r_1^2-r_2^2-r_2 l\right)-1;\quad a_k=2k\pi;$

$$\varphi_k=1-\frac{\sin w_k}{w_k}+\frac{r_2}{l}(1-\cos w_k)+\frac{r_1^2-r_2^2}{2l^2}w_k\sin w_k;$$

$$\psi_k=w_k\cos w_k-\sin w_k.$$

$w_k=2z_k$, $(k=1,2,\dots)$ - положительные корни уравнения $\psi(w)=0$; z_k – положительные корни уравнения $tgz=z$.

Нетрудно показать, что оригинал $F(t')$, соответствующий к изображению $f(w)$ имеет вид

$$F(t')=4f_0\left(1-e^{-2at'}\right)+ \\ +8e^{-at'}\sum_{k=1}^{\infty}\left[\frac{\sin a\beta_k t'}{\beta_k}+\frac{w_k\varphi_k}{\psi_k}\cdot\frac{\sin ag_k t'}{g_k}\right] \quad (18)$$

где

$$a=\frac{1}{2\lambda'},\ \beta_k=\sqrt{4\lambda' a_k^2-1},\ g_k=\sqrt{4\lambda' w_k^2-1}.$$

Используя теорему о композиции операционного исчисления, из (17) найдем $\bar{q}(t')$:

$$\bar{q}(t')=\frac{4l}{l+2r_2}\cdot\cdot\left\{f_0\bar{v}_p(t')- \right. \\ -4f_0\int_0^{t'}e^{-2az}\bar{v}_p'(t'-z)dz+2\sum_{k=1}^{\infty}\int_0^{t''}\left(\frac{\sin a\beta_k z}{\beta_k}+ \right. \\ \left.\left. +\frac{\varphi_k w_k}{\psi_k}\frac{\sin ag_k z}{g_k}\right)e^{-az}\bar{v}_p'(t'-z)dz\right\}. \quad (19)$$

где

$$\bar{v}_p(t')=\frac{24}{\pi^3}\sum_{n=1}^{\infty}\frac{1-(-1)^n}{n^3}\sin\frac{2\pi nt'}{T'},$$

$$\bar{v}_p'(t')=\frac{d\bar{v}_p(t')}{dt'}=\frac{48}{\pi^2T'}\sum_{n=1}^{\infty}\frac{1-(-1)^n}{n^2}\cos\frac{2\pi nt'}{T'}.$$

Формула (19), с учетом соотношения

$$\Delta p(t)=\frac{\mu v_c L}{l^2}\bar{q}(t'),$$

позволяет, при известной скорости движения плунжера найти полное давление на плунжер.

Результаты расчетов и выводы.

С помощью полученных формул проведены численные эксперименты по расчету полного

давления и скорости жидкости, используя следующие исходные данные:

$L = 1000\ m,\ h = 100\,m,\ v_0 = 0.60\,m/s,$

$p_0 = 10^5\ Pa,\ T = 20\,s,\ R = 0{,}030\ m,\ r_1 = 0.02988\,m,$

$r_2 = 0.010\,m,\ \lambda = 0.5; 1\ s.$

На рис. 3 представлен графики зависимости от времени полного давления на плунжер при его подъеме вверх. Графики соответствуют следующим значениям времени релаксации: 1 - $\lambda = 0.5\ s$; 2 - $\lambda = 1\ s$; 3 - $\lambda = 0$ (ньютоновская вязкая жидкость).

В расчетах, для значений плотности и вязкости нефти использованы данные, приведенные в [9, 10] для легкой нефти месторождения Варик и тяжелой нефти месторождения Коштар Узбекистана, при температуре 20^0:

a. $\rho = 750\ kg/m^3;\ \mu = 0.047\ Pa \cdot s$;

b. $\rho = 930\ kg/m^3;\ \mu = 5.2\ Pa \cdot s$.

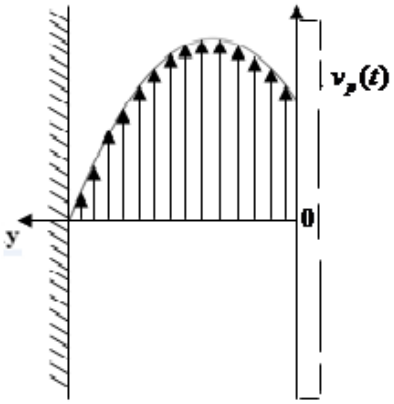

Рис. 1. Распределение скоростей жидкости в кольцевом пространстве между колонной труб и штанг относительно неподвижной системы.

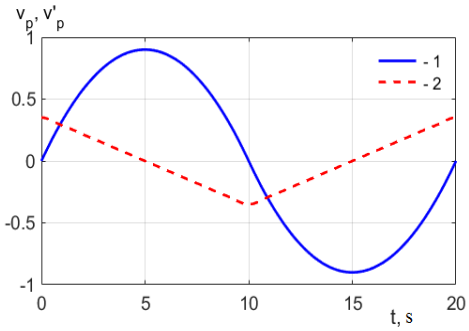

Рис. 2. Графики зависимости от времени скорости и ускорения плунжера. 1– $v_p(t)$; 2 – $v_p^{'}(t)$.

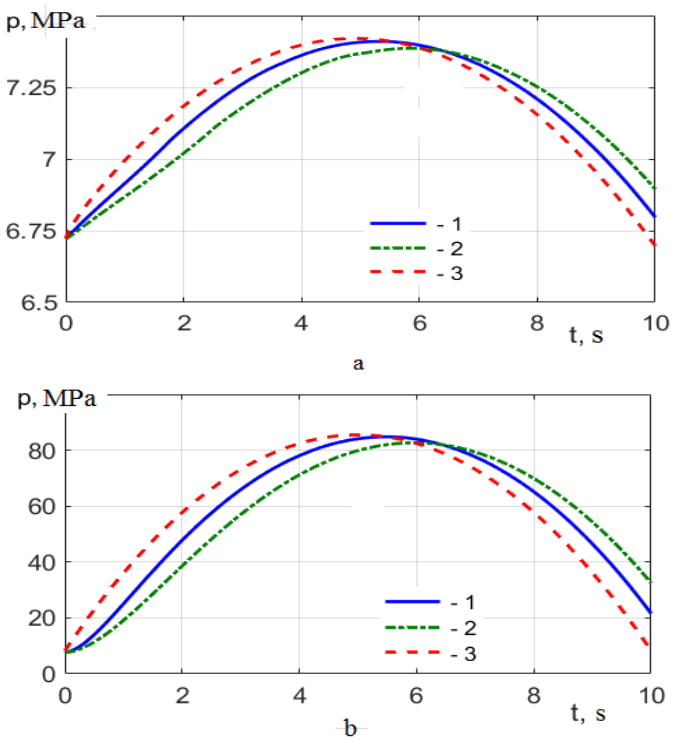

Рис. 3. Графики зависимости от времени полного давления на плунжер при его подъеме для: a - легкой нефти(месторождение Варик), b - тяжелой нефти(месторождение Коштар) при температуре 20^0.

1 - $\lambda = 0.5\ s$; 2 - $\lambda = 1\ s$; 3 - $\lambda = 0$. a. $\rho = 750\ kg/m^3$; $\mu = 0.047\ Pa \cdot s$; b. $\rho = 930\ kg/m^3$; $\mu = 5.2\ Pa \cdot s$.

Как следует из рис. 3, в начале хода плунжера вверх давление повышается и по мере его движения давление уменьшается. Повышение давления обусловлено влиянием инерционных сил, возникающих в системе штанга-труба-жидкость в процессе работе глубинного насоса. Вязкоупругие свойства нефти в процессе разгоне приводит к отставанию значений полного давления относительно вязкой жидкости, а при замедлении подъема и в момент торможения спуска – наоборот, к опережению. С усилением вязкоупругих свойств разница между профилями давления вязкой и вязкоупругой жидкости возрастает, максимум давления смещается вправо по оси времени (рис. 3,a).

Для тяжелой нефти Коштар (рис. 3,b), где вязкость более сто раз больше, чем вязкость легкой нефти Варик, полное давление возрастает больше десяти раз. Вид профилей давления сохраняется. Характер влияния вязкоупругих свойств также сохраняется, но степень его влияния возрастает. Это особенно заметно в начале и конце процесса подъема плунжера.

Выводы.

На основе приведенных выше рассуждений можно заключить, что в расчетах полного давления на плунжер, при эксплуатации нефтяных скважин, особенно, продуцирующих тяжелые нефти, необходимо учитывать вязкоупругие свойства нефти.

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OPPORTUNITIES OF ECONOMIC AND INDUSTRIAL POLICY FOR THE SOCIAL DEVELOPMENT OF SMALL CITIES IN THE SOUTHERN FEDERAL DISTRICT AND NCFU REGIONS FOR THE PRODUCTION OF IMPORT-SUBSTITUTING PRODUCTS

Abstract: *in the article, the authors came to the conclusion that the phenomenon ceases to be itself. Quality coincides with the essence. by managing quality, we get the opportunity to influence the essence, participate in its evolution, and direct its development in accordance with our interests. The problem of managing the quality of economic activity became relevant with the emphasis on handicraft and the emergence of a shop form of production, but it became particularly important at a time when the transition to mass industrial production was made. It was the Industrial revolution that made it possible to put a scientifically sound base under management, which, in turn, led to the corresponding requirements for the theory and practical organization of management.*

Key words: *quality, management, production, history, methodology, sustainability, need, consumer, priority, leveling, stimulating, geo-economic, socio-culture.*

Language: *English*

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Introduction

The destruction of small towns, which is observed in the regions of the Southern Federal District and the North Caucasus Federal District, is

also typical for other regions of Russia. Migration, lack of jobs, social problems provoke a deepening crisis and the federal authorities urgently need to change this attitude towards their regions, forming a new economic and geographical approach in their strategic management, highlighting three vectors of priority development for such regions, namely;

- equalizing (due to the redistribution of resources to equalize the living standards of the population, especially in small towns);
- stimulating (creation of conditions in regions with specific advantages of the formation of social conditions of life);
- geo-economic (ensuring security through the costly development of these regions, taking into account border and strategically important ties with other regions).

Main part

Planning belongs to the fundamental features of the history of human life, characterizes the essence of rationality in the form of consciousness. In order to become homo sapiens, man went through the evolutionary path of 2.5 million years. Our ancestors were homo habilis, homo erectus, direct predecessors who failed to take advantage of intelligence, African homo sapiens, non-ardelans, Cro-Magnons, the Altai form of homo sapiens, and possibly many other forms.

Reasonableness is not only the main sign of the quality of a modern man, it indicates the vector of development of the species. Labor, sociality arose in the process of natural changes, therefore it is not surprising that once upon a time there lived “skillful people” who were replaced by “upright people” who assimilated the stable characteristics of “skillful people”. The merit of homo sapiens is that, developing his rationality, he was able to give the development of labor the form of labor activity, and the quality of social life to social ties. Labor activity has become the basis of human history, society - a form of its organization, rationality - a driving force.

It is not enough to be reasonable, you need to realize the total significance of the mind as the ability to cognize and control activity. All crises in history are a product of the crisis of the rationality of consciousness, its cognitive ability and social responsibility. The concepts of "consciousness" and "intelligence" are different. Reasonableness is a sign of a species, consciousness is a sign of a social subject, which can be a person, community - marriage, family, social group, historical form of community. At the same time, consciousness and rationality differ exclusively within the framework of their historically established unity, they define the dualism of human nature, protect man as a product of evolution and serve as an instrument for his further development.

In rationality, the power of our knowledge, consciousness is a means of knowledge management, it directs and limits activity in the mutual interests of social subjects and natural conditions for the implementation of activities, therefore science is both a special form of cognition and a social means of regulating the possibilities of applying knowledge.

The need for science is due to developing labor. Labor in the world of living beings of the subhuman formation remains unchanged and is regulated by instincts, conditioned reflexes. The highest achievement of knowledge at this level is intelligence. Understanding, which opens access to knowledge of the laws of relations and changes, has gained relevance with the possibility of sustainable transformation of the environment. Science ensures the effectiveness and safety of human participation in the development of reality, both natural and social. Together with philosophy, it is designed to embed human reality into the logic of world development.

Activity management is an initial requirement for the sustainability of human existence in the developing world. Scheduling is a versatile activity management function. Conflicts in understanding the importance of planning activities are explained by the interpretation of the concept itself, and are primarily of verbal origin. Even Plato and Aristotle realized the epistemological peculiarity of the concept as a form of human knowledge. The concept, in contrast to figurative thinking - ingenuity - generalizes a range of specific phenomena, therefore it also presupposes its own characteristic expressiveness. Only a word can form a concept. It is with the verbal expression of the concept that numerous difficulties in achieving understanding are associated.

We define a general phenomenon not directly, but indirectly through the concept created by consciousness. The concept is revealed with the help of words. The importance of the verbal tool in scientific cognition prompted famous thinkers in the 1920s and 30s to organize a special study of the possibilities of the word as a way to formulate scientific understanding. The linguistic trend in the positivism of the stated problem could not be solved, but it made it possible to comprehend its significance for science. The transformation of science in the process of scientific and technological revolution in the middle of the twentieth century into a direct productive force has shown that the correct interpretation of the content of a concept in words is also significant for managing the practical application of scientific creativity in economic activity.

The 21st century has sharpened the scientific, philosophical and practical interest in competition. The scale, content, forms and significance of competition put it in a number of global problems of human development with one important clarification: it is not humanity itself that benefits from achievements in the competitive struggle, but individual subjects of human activity, starting with the personality of the executor and manager, and up to

those states in whose interests they work. Therefore, the organization of effective participation in competition should be considered as a leading indicator of professional competence, spiritual maturity and political consciousness, bearing in mind, of course, economic policy.

A special place in this struggle, you cannot call it otherwise, is occupied by the attitude of self-awareness, the system-forming factor of which is professional culture. If human capital determines the growth of production, then the quality of education lays the foundation for human capital. Competencies are not effective by themselves, they are valid when they are formed as the needs of a person, developed in many ways and in harmony with his, national and universal interests.

The formula for the harmony of the interests of the individual is extremely simple. It was discovered 2500 years ago by Confucius, and I. Kant clarified it, giving a rational look “another person should not be a means for you”. Summing up the thoughts of our great ancestors, let's say: the only reliable effective means of sustainable development of all manifestations of human life will be the achievement of the mutually interested coexistence of people. With regard to production in general and consumer goods, in particular, the conclusion is even more simplified to the creation of technical, economic and humanitarian (socio-cultural and psychological) conditions in a specific production, aimed at a high-quality, demanded and affordable product. The organization of production can be considered reasonable only when it is subordinated to a single goal - the satisfied customer needs. Unfortunately, our modern organization of the economy opposes the producer and the consumer, turning them into opponents, instead of stimulating them to act as a team.

Where are the reasons for this abnormality, what? Is this connected with objective factors, we have not yet been able to overcome the resistance of whose forces, or are the inhibiting forces of an inertial nature, have we inherited, introduced as a modernization and we are able to fight them, and not with the consumer in the market? What are our reserves?

The success of the critics of the Soviet system of managing the national economy, on the wave of which they tried to put an end to the socialist gains in the sphere of planning, was largely a consequence of elementary pseudoscientific speculation in the content of basic concepts, successfully superimposed on the provoked objective difficulties and the low level of mass economic and political thinking - the habit of waiting " instructions from above ”, hopes for the prudence of statesmen. The 1990s will go down in national history not only as a time of another political turmoil, socio-economic crisis, but also as a test of national identity, a harsh time of its cleansing from various kinds of temptations. You must rely exclusively on yourself. Everyone in the West, East, South of Russia should have the status of partners in resolving global challenges, it is not reasonable to ignore the experience of others, but you need to follow the common path in your own way. You can only believe in yourself, regularly checking your achievements against the direction and development plans, this is a strategic postulate.

As for the practical course of implementing the political strategy, the situation has also cleared up. Without planning, there is no sustainability in development. You need to understand the multidimensionality and scale of planning. The organization of production in all its scales requires planning. Socialism and capitalism should be viewed not as alternatives to social progress, but as different planning systems for socio - economic development.

Socialism cannot be historically one-dimensional, since it is historically prepared and must absorb the national specifics of development, and capitalism is just as diverse. Socialism and capitalism have a common production platform, they require the industrialization of the economy. K. Marx and F. Engels viewed socialism as a solution to the contradictions of an industrially developed economy. It is possible to deny planning as a tool of socio - economic development only in one case when the content of the concept of "planning" is distorted.

The modern world economy has a global, more precisely, integrated look, thanks to the fact that it has become industrial by the third millennium. Along with industrialization, the contradictory nature of the organization of production and the forms of its stability was revealed. Hence the permanence of crisis phenomena. The erection of competition and freedom of the market to an absolute has led to the fact that they no longer reckon with the magnitude of losses from the struggle of all against all. Japan, having borrowed the specifics of the socialist practice of the Soviet Union, opposed the principle of participatory management to the ideal of competitive struggle for survival. Japanese analysts have rightly identified the advantages of consolidation in creativity over the desire to defeat a competitor at any cost. Participatory nature does not negate the importance of competitiveness; it gives competition a cultural expression that is naturally inherent in a civilized form of life.

Competition in the field of activity is a refined form of struggle for survival. It is regulated by law, but the moral value of the social organization of human life is suppressed in it. Competition in the absence of dominance in the relationship of solidarity inevitably leads to disunity, conflict and, as a result, to the strengthening of the functions of law due to the weakening of the position of morality.

Physics recognizes four forces: electromagnetic, gravitational, strong and weak interactions. By analogy with nature in modern social life, one can also

distinguish strong and weak interactions. Strong provides morality.

The fact that moral interaction is really strong confirms the way to maintain it - self-control of the consciousness of the individual and all group subjects that form society. The weakness of the legal interaction of social subjects with each other and with society as a whole requires the organization and functioning of a special state institution. The Neanderthal man, like the Cro-Magnon man, was already intelligent and socialized, moreover, in physical status he possessed greater strength, but he could not stand the competition and died out. One of the versions of anthropologists claims that the weak link of the Neanderthal was his lack of communication. Social relations should serve as the greatest possible realization of the potential of homo sapiens. Competition in the economy reproduces subjective originality, in particular, the identity of the individual, and, in a certain sense, it is natural and reasonable, but homo sapiens has developed in society, therefore, not differences are called to be social and economic dominant, but the need for joint creation of something new.

All the outstanding learned economists of the nineteenth century were noted in the history of philosophical thought. This fact is indicative. It illustrates the specifics of economics. Its subject is the processes on which the personal and social life of a person is based. The attempts of liberal economists to isolate economic activity and oppose it to political activity is nothing more than the desire to bring capitalism beyond their own understanding of social progress in the recent past - to stop social history at its bourgeois level.

Neoliberal ideologues refuse to support the logic of a democratic approach to understanding history. When the democratic movement was formed in England and France, its founders represented capitalism as a way of resolving social and political contradictions. Feudalism has exhausted its historical resources, argued the democrats, and must give way to a social system that is more historically dynamic, capable of meeting social needs to a greater extent. Bourgeois society, following this pattern, will also become obsolete over time, but in the old feudal tradition it will cling to the lost right to represent a social perspective.

It is easy to see that less and less propaganda uses the terms "capitalism", "bourgeois society", replacing them with "industrial", "new industrial", "post-industrial", "technotronic", "information" societies. The concept of "mode of production" is simplified in liberal interests to "form of organization of production", and political economy is minimized into economics. The goal of such a transformation is to transfer economic thinking to the level of technical concepts, which will simplify economic methodology, limiting itself to mathematical calculations and models.

The main thing is to remove the burden of political responsibility from economic theory, to separate economic reflection from state concerns. Property relations, distributions are camouflaged, their disproportions are transferred to the section of technical problems. The meaning of the outstanding achievements of economics is distorted. So, A. Smith's justification of the need for freedom for subjects of production activity is reduced to freedom of competition, while the Scottish scientist also had in mind freedom of cooperation for producers, which is especially significant in relation to small and medium-sized production. Cooperation develops economic planning.

In light of the current tensions in international relations, the projection of political constraints on economic relations seems to be an extremely significant measure to understand the concepts of "governance", "organization" and "planning". It is on them that the revision of the classical political and economic scientific heritage is focused.

Control theory in general form was formed by the end of the 1950s, when, after numerous experiments using differential equations and the calculus of variations, modifications of classical theories and methods, they found that the seemingly different problems of engineering activity and economic change have a common mathematical description. Management as a concretely subject-oriented activity presupposes the need for a high level of organization of the process, which is impossible without the inclusion of planning, built on scientific calculations, in the activity.

The problem here is not at all Hamlet's: "to be or not to be !?" Problem: what kind of planning should be? At a time when the producers were artisans and guild organizations, production was very small, so everyone planned according to their possibilities, planning was not among the urgent problems. The situation changed radically with the Industrial Revolution. Production has become massive, the time has come for competition for the market for raw materials, sales, and labor.

Reflecting the changes that have taken place, planning has changed in all its modes of action and forms of manifestation. Hence the differences in the attitude to planning among producers and in economic theory, which is going through a difficult time in its history. Bulgakov's professor Preobrazhensky taught: revolutions, in order to be successful, must begin and ripen in the minds of people. The writer's observations confirmed the events of the crises of the 21st century.

Critical researchers were uncomfortable even before the newest crises, they came close to understanding that economic recessions, recessions that significantly hinder social progress, are not caused by external factors: financial adventures,

political and military conflicts, infectious pandemics. Their reasons are in the contradictions of production itself, in particular, the ineffectiveness of management, conjuncture caused by political considerations that run counter to the regularity of the movement of the economy. The immeasurable number of Nobel laureates among economists, approaching the number of physicists who have developed a modern scientific picture of nature, only once again convinces of the stability of the crisis of economic theory.

The manifold increased interest in Europe in K. Marx's "Capital" demonstrates disappointment in the research talent of contemporary economists. Europeans are not confused that the scientific analysis of A. Smith, D. Ricardo, K. Marx, J. St. Mill, was carried out within the limits of the requirements of the classical period of the history of science, which replaced the non-classical, giving way to the post-non-classical. The essence is not in the names, it is in the changing ideas about the specifics of scientific knowledge.

Scientific knowledge is fixed in theory, but not every theory has the quality of scientific character. The development of science is, from a methodological and epistemological point of view, a change in the rules for achieving the quality of the cognitive process. "… The growth of scientific knowledge, wrote one of the most authoritative experts in the field of epistemology, K. Popper, is the most important and interesting example of the growth of knowledge. In considering this question, it should be remembered that almost all problems in traditional epistemology are associated with the problem of the growth of knowledge.I am inclined to state even more: from Plato to Descartes, Leibniz, Kant, Duhem and Poincaré, from Bacon, Hobbes and Locke to Hume, Mill and Russell, the development of the theory of knowledge was inspired by the hope that it would help us not only to learn something about knowledge , but also to make a certain contribution to the progress of knowledge, that is, to the progress of scientific knowledge. "

The German specialist drew attention to an important change in the vector of movement of scientific and philosophical knowledge. In the initial period of the history of science and philosophy, when a scientist and a philosopher most often acted in one person, there was a belief that the subject of study were objects of interest, or the knowledge about them that had already been obtained in experience - ideas, images, concepts. From Berkeley, Hume came a new interpretation: it is necessary, in the name of achieving objectivity and the significance of knowledge, to investigate not thoughts, opinions, views, but logical signs of judgments, statements and proposals. K. Popper commented on this shift of interest in the following way: "I am ready to admit that this replacement of Locke's" new method of ideas "with a" new method of words "was undoubted progress, and it was urgently needed in its time." However, K. Popper refused to recognize the "new method of ideas" as the main method of epistemology, explaining his opinion by the one-sidedness and vulnerability of its use. We were forced to recall the thoughts of K. Popper by the following consideration: the classics of political economy began with a real-life subject, trying to discover its stable characteristics, developed concepts that reflect these signs, tried to "glue" them into a system describing a change in the state of the object of research, rested against the contradictions of ideas and reality, they discussed, relying on the real practice of the analyzed phenomenon. They were contemporaries of the Industrial Revolution and the revolutionary potential of classical capitalism.

Capital was then industrial capital. Financial capital was just being formalized into an independent system. Political economy reflected not speculation, virtual phenomena, it served the real movement. The vector of industrial and economic progress coincided with the ideology of those who were interested in it. The transformation of victorious capitalism turned out to be in the interests not so much of society as a whole, but of a certain part of it, by the way, also torn apart by the specifics of interests.

Economic theory, which has a connection with the activities of social subjects, began to lose the need for objectivity and therefore moved from the position of analyzing ideas to analyzing the forms of their expression. The methodological equipment of economic analysis has also changed. Quantitative analysis has supplanted the quality of the scientific synthesis of primary information. Conceptual analysis was replaced by linguistic exercises and semantic research under the plausible pretext of overcoming the ambiguity of concepts. Not a single science has appeared as many new terms as in economic theory.

The formation of new words is a natural phenomenon for science, but in each case, the legitimacy of neologisms is needed. Physicists, mathematicians, chemists, as a rule, make do with the accumulated stock of verbal expression of concepts. In economic theory, there is a kind of competition - who will come up with a new word more and faster, so the description of real phenomena is not concretized, but blurred, complicating the understanding of the subject.

The concept of "planning" generalizes the functioning of subjects of economic activity, the scale of its movement and much more. Planning can be within a single enterprise, then it is not a political element of management, it is determined by the management based on the economic situation; sectoral, on this scale it already has signs of a political phenomenon. Planning is divided into directive - mandatory for execution and indicative, that is, conditional, allowing you to count on preferences. Distinguish between current and long-term planning.

But, regardless of its nature, planning is a universal management tool in the systemic organization of activity - cognitive, practical, synthetic.

F. de P. Hanika - professor at the University of Khartoum, gave a course in Cambridge. In the book "New ideas in the field of management", using the example of drawing up financial estimates, he distinguishes three main points in resource management and in all planning comes first. Moreover, he begins the final chapter "Operations Analysis" with "Improving management technology" and concludes: "A group of new methods based on network analysis and used in planning and regulating the execution of complex projects is rapidly evolving."

On the crest of the scientific and technological revolution wave in 1967 in the United States, the well-known analyst and government official J. Galbraith publishes the monograph "New Industrial Society". Interest in the views of a specialist is evidenced by a rare fact: just two years later, Galbraith's book was translated and republished in the USSR with a foreword by N.N. Inozemtseva, CM. Menshikov and A.G. Mileikovsky.

The reflections of J. Galbraith are still interesting and relevant, therefore, in the context of our preface, we cite fragments of his text selectively, but relatively completely. J. Galbraith asserted: “Of all the words in the lexicon of a businessman, words such as planning, government support and socialism are least pleasing to his ear. Discussion of the likelihood of these phenomena occurring in the future would lead to the realization of the amazing extent to which they have already become facts. It would also not have been without a statement of the fact that these terrible things arose at least with the tacit consent of the industrial system or as a result of the fact that it itself needed them. "

J. Galbraith sees the future not in confrontation, but in convergence: “Thinking about the future, the scientist wrote, would also reveal the importance of the trend towards convergence of industrial societies, no matter how different their national or ideological claims may be. We mean convergence due to approximately similar planning and organization systems. Convergence is associated, first of all, with the large scale of modern production, with large investments of capital, perfect technology and with a complex organization as the most important consequence of these factors. All of this requires control over prices and, as much as possible, control over what is being bought at those prices. In other words, the market must be replaced by planning…. Industrial production on a large scale requires that the sovereignty of the market and the consumer be largely eliminated. ” Further J. Galbraith makes an even more imperative conclusion: “The industrial system does not have the ability to regulate aggregate demand - the ability to provide sufficient purchasing power to absorb everything it produces. Therefore, she relies on the state in this area. " The economic policy of the government of Boris N. Yeltsin was determined not by the international experience of political and economic reforms, but by the circle of liberal advisers from the United States, who went bankrupt in their own country. Those who had a chance to listen to Gaidar's speeches in substantiating the economic redistribution of society were constantly surprised at their terminological richness and unintelligible effect. Gaidar was aware of the adventurism of the economic program, its grave consequences for the people and national history, but the position turned out to be higher than professionalism.

It was not by chance that J. Galbraith devoted a separate chapter to education and emancipation, reminding university professors of their professional responsibility for the social consequences of their inaction. Professional education, by its systemic position, should form an understanding of the essence of economic and political processes among specialists. It is dangerous to substitute education for enlightenment and training, it is designed to create conditions for the formation of the ideological position of the individual: “Not a single intellectual, not a single artist, not a single teacher, not a single scientist has the right to allow himself the luxury of doubting his responsibility. Nobody, except them, can take upon themselves the protection of essential, for our time, goals, ”concluded the American politician, concerned about the fate of the world.

Social and cultural aspects of planning run through the entire history of improving the quality management system for production and manufactured goods. It is easy to trace how the scale of the approach to quality planning changed from the first experiments of F. Taylor, A. Fayol, G. Ford Jr. and A. Sloan through the research of A. Maslow's needs, V. Shuhart's proposals, E. Deming's management program, addition of K. Ishikawa to I. Juran's recommendations, F. Crosby, A. Feigenbaum and the achievements of Soviet specialists. In the history of quality management, the importance of two factors has become clearer than in the rest: firstly, the dependence of quality on planning excellence, and secondly, the need to consider planning not only in the technological aspect, but also in the broad sociocultural aspect, in order to involve all spiritually in production activities. -the physical potential of the individual.

Two centuries ago, the French sociologist and economist Proudhon decided to understand the origins and causes, and at the same time in the minds of the disadvantaged under the conditions of capitalist accumulation. He expressed his thoughts in the book "The Philosophy of Poverty", to which K. Marx responded with his monograph "The Poverty of Philosophy", which was pretty much forgotten. K. Marx showed the dependence of socio - economic

research on the philosophical maturity of analysts. By that time, K. Marx and F. Engels were actively introducing a new view of philosophy, declared in K. Marx's "Theses" about L. Feuerbach. Philosophy cannot be only a form of contemplative worldview, philosophical reflection should serve as a tool for comprehending the worldview and methodological foundations of human activity in its entire spectrum from cognition to transforming reality. Without her participation, scientific knowledge and social practice will wander in search of a philosophical surrogate, their own private philosophy aside from the millennial movement of the most advanced people in wisdom, recognized national and transnational authorities.

We have already noted the stable connection between leading political economists and philosophy at a time of intensive bourgeois progress. This progress was contradictory, unevenly distributed, but it was, because there was a philosophy of bourgeois development. Economic science relied on philosophical methodology and scientific discoveries. The leader of progress was industrial capital, focused on the construction of real production facilities, the use of scientific and technological achievements. In the twentieth century, capitalism has changed significantly, its ideologues have lost their former confidence in a prosperous future. Empiricism supplanted rational thinking, and with it came utilitarianism in its most primitive expression. The result of the reorientation was a spiritual crisis, noted by all outstanding thinkers - K. Jaspers, M. Heidegger, Z. Freud, P. Sorokin, K. Popper, B. Russell, J.P. Sartre.

Planning has a world outlook scale, it is a function of rationality, which took shape in human consciousness. Let us repeat: such fundamental signs of consciousness as the ability to abstract and generalize in combination with the anticipatory reflection of changes in reality intersect precisely in the need to plan activities. Otherwise, the knowledge of the laws of change, the delayed effect of actual action loses its meaning.

Planning can also be understood as the realization of freedom of action. The question: what kind of planning ensures the effectiveness of activity is solved in theory, but the reality of planning is determined by politics, and politics only partially coincides with logical necessity. If politicians really strive to make the development of production high-quality and efficient, then they must expand planning to a total scale, find a balance in the structure of investments, thinking, first of all, about enhancing human potential. In order for human capital to work and become profitable, it needs corresponding accumulations. This is the law of normal capitalism. There are examples of the implementation of economic policy focused on the planned development of the human factor. Let's refer to the Chinese modification of the principle of inclusiveness developed by D. Acemoglu and J. Robinson. The Chinese concretized the ideas of the authors of the project in ways of achieving common goals: by putting human resources development as a priority; a focus on achieving full employment; professional development of workers, social security and sustainability of promotion, which guarantees the small towns of the regions of the Southern Federal District and the North Caucasus Federal District of reducing the migration of the population located in these regions, we consider it justified to focus on the analysis of planning experience, the reasons and conditions for the effectiveness of production development, depending on which planning should be the locomotive progress in the real sector of the economy of these enterprises located in small towns. Theoretical research is combined with a critical analysis of specific practical results, which determines the success and forms the stability of these enterprises.

Conclusion

The vector of modernization of the regional management approach has been determined. Time has already passed for hours. It remains to remind that “Time is our living space”, therefore, lost time, untimely actions inevitably lead to the loss of the advantage of an advantageous position in the competing world - failure to understand this is mortally dangerous for all of Russia.

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METHODOLOGICAL BASES FOR EFFECTIVE MANAGEMENT OF PRODUCTION ACTIVITIES OF ENTERPRISES IN SMALL CITIES OF THE SFU AND SCFU REGIONS FOR THE PRODUCTION OF COMPETITIVE PRODUCTS

Abstract*: in the article, the authors came to the conclusion that the phenomenon ceases to be itself. Quality coincides with the essence. by managing quality, we get the opportunity to influence the essence, participate in its evolution, and direct its development in accordance with our interests. The problem of managing the quality of economic activity became relevant with the emphasis on handicraft and the emergence of a shop form of production, but it became particularly important at a time when the transition to mass industrial production was made. It was the Industrial revolution that made it possible to put a scientifically sound base under management, which, in turn, led to the corresponding requirements for the theory and practical organization of management.*

Key words*: quality, management, production, history, methodology, sustainability, need, consumer, priority, leveling, stimulating, geo-economic, socio-culture.*

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Introduction

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The answers to these questions must be sought in systems analysis, which requires an appeal to scientific and philosophical theory. One should not be afraid of the tension of thought-creation. The famous naturalist D. Dan, analyzing the meaning of competition after Charles Darwin, came to the conclusion that competition in the struggle for existence is not limited to greater and better adaptation to circumstances, it strengthens the nervous system and develops the brain. So let's start with philosophical reflection.

In economics and politics, many phenomena are known that contradict the nature and functions of

these spheres of public life. Practical development does not always coincide with historical logic. History, in spite of its rational basis - the history of the implementation of the activity of Homo sapiens, often drives the reflection of reason into a dead end. In this connection, a problem arises: if the history of the socio-cultural activity of a "reasonable man" should be, at least, no less reasonable and logical than the individual mind of a person subject to randomness is incomparably greater than the socialized mind of humanity, then how to explain the presence of social anomalies, a kind of "jambs"?

They are historical dead ends from which we must regularly get out, or the product of the costs of the underdevelopment of the organization of social relations and management, including here a limited knowledge of historical laws. In other words, we have before us the riddle of history and we should determine where to look for the keys to its solution - in consciousness or in objective reality? What exactly should you focus on? We do not have an answer that could be reasoned enough. Moreover, it seems to us that it would be more legitimate to study the nature of this problem in parallel - both in social life and in public consciousness.

The reasonableness of the history of human activity could not fail to lay down a logically expressed picture, but the absence of extra-logical processes in real history would look as if the scenario of history had been written by someone in advance and the one who invented it continues to orchestrate the course of the historical movement. N.G. Chernyshevsky compared history with Nevsky Prospekt, laid along a ruler. He did this to emphasize that historical consistency requires a specific awareness. History is comparable to the order of movement in the physical space of being, but it is located in it nonlinearly.

Main part

There are no straight lines in nature - they are conditional and exist as intervals of movement. The same is in the development of society, it is reasonable to the extent of historical concreteness. And each historical concreteness carries in itself both something new and unresolved or limitedly resolved problems, left as a legacy to passing generations. Historical logic stumbles upon the imperfection of historical concreteness and will be better understood as a sequence of concrete historical rationality built from the contradictions of the rationality of human activity, in fact, the relative logic of the historical specifics that accompanies the historical ascent of the socialized Homo sapiens.

The 20th century confirmed the idea of historical materialism in its Marxist interpretation. The development of social life is based on the movement of material production, the connecting element of which was originally a rational-active person. Human history grew out of labor, but the current state of labor became possible only at the stage of homo sapiens, which means the following: production serves as the basis of social progress when it finds its expression in human intelligence. To be a real force, production must correspond to the needs of people, needs - to manifest in thoughts, thoughts to capture feelings, to become a conviction.

The improvement of production is due to the transformation of science into a direct productive force, technical progress, however, in no less dependence, the productivity and quality of productive activity depends on the moral factor - the attitude of a person to work. In this light, the Japanese mentality is indicative, developed by the original economic policy, linking the interests of owners and employees. Its core is a national tradition dating back to the history of Confucianism. Confucius taught: “When governing the state ... you need constant attention to business and sincerity in relation to people, moderation in spending and love for the people. And it is no less important to encourage people to work ... ”.

In Japan, China and other countries of the East, you can find examples of moral disorder, but they do not so much indicate a sociocultural reorientation in the national format, as about the historical costs of the development of national culture. There, the overwhelming majority of the population continues to listen to the words and reasoning of teachers. “Wealth and nobility, explained Confucius, are the subject of human desires, but a noble husband does not use them if they got it illegally ...” How can a noble husband bear such a high name if he has lost his philanthropy? A noble husband does not part with philanthropy for an hour, it is certainly with him: both in trouble and in worldly vanity. " To maintain the prestige of the company in Japan, the supporting phenomenon of the social form of life is actively used - the family, family traditions that accumulate the power of morality. The family serves the firm. Each family member, traditionally associated with the history of production, perceives the company and his work through the prism of family tradition, relieving the burden of labor alienation, which is inevitable in the conditions of exploitation. Exploitation itself drapes into the form of social partnership. The essential contradictions of bourgeois production remain, but the form of their perception by consciousness changes. In modern Russia, the term "exploitation" is not used to characterize production, which is not surprising given the existing practical attitude to national culture, especially to education, which is officially aimed at developing the competencies that the employer needs in the first place.

The quality of production and the quality of the product of production depend on technical conditions - technology, technical means, organization of

production, professional qualifications of organizers and performers and attitude to work. The last two components form the content of the concept of "subjective factor" or "human capital". Relying on the achievements of the scientific and technological revolution, entrepreneurs try to minimize the complicity of the “subjective factor” due to its volatility. Without advertising, the "subjective factor" refers to the conditions of uncertainty and risk.

The problem here is that all attempts to limit the presence of the subjective factor in production and, mainly, in its technological component, inevitably lead to the absolutization of the technical component. It becomes a total means of increasing labor productivity, production safety and profitability. Thus, the management of the organization of production development is delegated to artificial intelligence, built on the laws and rules of formal logic, expressing one of the sides of development - conservatism.

The original law, and, in essence, the principle of this logic is the law of identity. The subject and the subject, their connection are recognized as unchanged. Movement is reduced to its relative moment - rest. Peace replaces movement and with it change as the essence of any movement.

Charles Darwin said: nature does not like jumps and explained, because everything consists of them. J. Cuvier, on the contrary, tried to understand the variability of species as a result of terrestrial cataclysms. The life of nature tells us that we must be afraid of logical linearity in thinking. It is effective when something is actual to bring to perfection in its traditional manifestation. For example, in the case of improving the existing assortment, achieving a rational balance of customer requirements for a well-known attractive product, its quality and price. But everything comes to an edge, improvement is no exception, therefore, you need to look in advance for options for an interesting perspective development of the product line, think not about what, in principle, already exist, improve what is available, but try to fantasize systematically, outstripping demand with innovations. Otherwise, it is irrational to manage the needs of buyers today.

Our thinking in that part, which is called creative, creative, is spacious enough for innovative actions. It is only important to understand that beyond the horizon of the known, Aristotelian logic suffers its heuristic potential. Forward thinking is thinking trying to “grasp” the direction of change in commodity production. It is dominated by the possibility in thinking of anticipatory reflection of reality - a property discovered by P. Anokhin. There are physiological grounds to foresee changes, mental prerequisites in the form of will, needs, emotions are also natural. It remains to look for logical tools. The arrow of movement should be translated from Aristotelian formal logic to Hegelian dialectical, based on the principle of development of the content of concepts and changes in the concepts themselves. Representing the peculiarity of dialectical logic, its fundamental difference from the logic of Aristotle, G. Hegel wrote: “In rational logic, the concept is usually considered as a simple form of thinking and, more precisely, as a general idea ... as if the concept as such is something dead, empty, abstract ". And he clarified: "Of course, the concept should be considered as a form, but as an infinite, creative form."

It is no coincidence that Karl Marx's associates noted that the founder of the universal understanding of dialectics did not leave the textbook to the heirs, since they were supposed to be the logic of analyzing the movement of production in Capital. K. Marx showed how the logical limited thinking of production managers reduces the process to capital management and brings production not only to a crisis provoked by overproduction, but also to social and political tension. The development of political economy after Karl Marx was expected, subordinated to the historical rehabilitation of capitalism. The intellectual and political forces concentrated on identifying the perfection of commodity production with its bourgeois form of organization.

This is where the features of Aristotelian logic came in handy, aimed at the immutability of the conditions of inference. If commodity production is the only universal reality of an objective historical process in a developed society, then history itself is destined to be carried out with dignity exclusively in the form of a bourgeois organization. Thus, the consumer's thinking, also tuned in a general form to the formally logical type of action, leads to the final conclusion: the period preceding capitalism was prehistoric, just becoming. The true history of commodity production is being created in bourgeois form. Objective reality was embodied in an absolute, that is, ahistorical form. Further history can only be understood as the ascent of capitalism to the highest and absolute achievements and the all-round defense of the stability of the bourgeois system, which is optimal for a commodity economy.

The power of logic is in the ability to build an internally consistent theory, but the truth of any theory is verified by more than one of its sequences. Here, the correspondence of the consequences of the theory to the realities of life is of particular importance. Economic theory is being tested on a massive scale, because its results directly affect everyone. People may or may not be producers, but they consume the products of production, and everyone wants to make consumption consistently of high quality and corresponding to the ability to pay.

Beginning with handicraft work and the guild form of its organization, the quality of the goods pushed all other signs of production into the background. While the division of labor wore a guild form, and inside the guild, everyone produced goods

up to the final marketable form and fully guaranteed the quality with their brand, the quality of production and the quality of the goods remained in the unity of existence, and the problem of the quality of the goods was simplified, boiling down to compliance with the technological standard of production. Production was a way of life support for the manufacturer, so the relevance of the quality of the goods was removed by the specifics of his attitude to production.

On the market, the goods were of high quality, the only thing to be feared was falsification, which did not have the current scale and was resolutely suppressed both by the state and by the self-regulation of trade. For mass production, which was the main consequence of the industrial revolution, the problem of the manufacturer's interest in the quality of goods among the socially significant was not noted. It undoubtedly existed, but the nature of production did not allow it to leave the sphere of private consciousness and materialize in a commodity assortment.

Potentially, this problem appeared even before commodity production, but at that time it was in the form of an abstract possibility, because the reality was the relevance of the quantity of the product produced. Manufacturing was only gaining momentum as a source of human vitality. First, the problem of quantity was born, the increase in quantity raised the question of quality, since it became possible to compare the product produced, specialization of production was outlined depending on the originality of the natural environment.

The emerging market required a variety of products. We needed goods within the framework of the difference in the purchasing power of consumers. Factory production, based on a technical base, opened up the prospect of varying the quality of goods. The harsh production restrictions that characterized the shop floor have receded. Products of various qualities appeared on the market. In the British philosophy of the Enlightenment, the very concept of quality was actively discussed. J. Locke proposed a version of the combination in determining the quality of the objective properties of objects and their subjective perception by consciousness.

So far, unfortunately, quality management is carried out by introducing ideas into production that were not developed in it, but in "pure" management theory.

Such a quality management mechanism raises the significance of scientific analysis, defining the role of a subsidiary, experimental farm for the self-movement of production towards quality. A retrospective look at the history of understanding how to manage the quality of production in general, demonstrates clearly that this story is very similar to the movement of thought on the principle of "trial and error". Each subsequent "theory" after S. Colt (1870s), - G. Lalande, G. Ford, A. Fayol, M. Weber, F. Taylor, V. Schukhert, E. Deming, I. Ishikawa, I. Jurana, F. Crosby, A. Feigenbaum invariably resembled a way out of the impasse into which her predecessor led, until in the end they replaced the key concept of the IC with the QMS - "Quality Management System".

Comparison of QMS with SK allows us to consider the trend of movement - the desire, while developing a new approach to quality management, to overcome the narrow technological view of quality as a certain standard limited by the production process outside the conditions of consumption.

The interpretation of the quality of a product that has developed under the influence of economic rationality does not reflect the socio-cultural status of a product, at least a consumer product. It is advisable to look for a qualitative characteristic of a product intended for mass consumption at the junction of its production, economic - household and socio-cultural merits. Moreover, it is desirable that the product not only satisfy existing needs, but also stimulate their cultural development, serve as a tool for the development of the consumer's personality. Human capital participates in the creation of a product of production, and production is designed to contribute to the improvement of the individual. There is no other way to overcome alienation in the conditions of the absolutization of private property and its distribution disproportionate to labor. Only the imparting of creativity to work and a reward corresponding to creativity can be “removed”, expressed in terms of Hegelian philosophy, the tension of alienation. The quality of a product in a broad sense can be considered as a factor of social progress and as a test of sociocultural achievements of social development.

In defining quality, the most common drawback is the lack of consistency. Quality is defined as a set of essential properties. The usual method of selecting such is the method of pyramidal arrangement of the properties of an object. Important, but not defining ones, remain at the base, and as we ascend to the top, a hierarchy of the remaining properties is formed. At the top, we get the sum of the main properties, which are included in the definition of the quality of the object. G. Hegel in his time cleverly defined quality from the opposite - “quality is that, losing that, the object ceases to be itself”.

Following the example of the great thinker, let us define "shoes" as "clothes for the feet." How correct is this definition? For shoes, probably yes. For the quality of the shoe is unlikely. If you deprive the shoes of the ability to be "clothes for the feet," then they really will not be shoes. If the shoe only retains its inherent ability, then the required quality of the product will be uncertain. “Footwear” can be dangerous due to toxicity of the material, attachment means, and construction that is inconvenient for movement. The formally built requirement for an item does not coincide with the quality of the item. It is significant as a prerequisite for the quality certainty of

a product. The definition of the quality of a product should be based on its functional purpose. The functional purpose should be considered as the state of relations of the property formally defining the object with the specifics of the operation of the object, its commercial purpose, enclosed in the consumer value of the goods.

The legs, for which clothes are sewn in the form of shoes, represent part of a living organism. These are not pads or limbs of a corpse, also designed for specific clothing. Clothes for the feet will not be shoes until sufficient evidence of their safety is obtained - hygienic, ergonomic, industrial, household and household. Quality is not a set of essential properties of a product; it is their system, the system-forming feature of which is indeed the ability to perform some formally most significant function. It is laid in the basis for determining the quality of a product by "growing" then the system itself, as a pearl in a shell is grown from a random grain of sand or the Periodic Table of Chemical Elements from atomic weight.

G. Hegel was right in his definition of quality, it is always better to start with what is "in sight", then to build up the definition. There is an electron shell around the nucleus of an atom, and together they define an atom. We put quality in the definition, revealing it later in the aggregate of concretizing properties.

From a philosophical point of view, the quality of an object, reflecting the diversity of the world, reproduces in itself this objectively existing object difference. The quality of a product, especially for mass direct human consumption, requires additional clarification associated with the manufacturer's responsibility for the safety of using the product. The quality of consumer goods is more complexly structured. Its definition includes the systemic arrangement of the main competencies of technical and humanitarian significance.

By its definition, footwear should ensure the interaction of two fundamental competencies - safety and comfort during operation. The aesthetic properties of shoes are subordinated to them and are packed in them. With their help, the producer "lures" the consumer like the flowers of plants that call on insects, which, through consumption, produce the work of pollination.

The cultural appreciation of a product is mistakenly simplified to the level of aesthetic value of the product. The cultural status of a product synthesizes in itself both the culture of performance and the culture of consciousness of the manufacturer, who decides what materials to use, in whose interests to act - the profitability of production or the needs of the consumer who trusts the manufacturer. Ascending, we can easily rise to the very top - the culture of social consciousness. In some countries they do not steal, they consider deception to be meanness, but in others everything is built on these vices, they are legalized, because they have grown into the national mentality.

The substitution of a philosophical understanding of the quality of a product by an economic one is natural for an economy aimed primarily at making a profit, increasing capital in private interests. The economic dominant in the quality characteristic has an ideological basis. The desire to separate the economy from socio-cultural development should be considered in the same context. The idea that the economic movement should be absolutely independent of political oversight and humanitarian functions, everything non-economic is provided by taxes from the economy, is gaining strength, and most importantly it is supported by the authorities.

Attempts to oppose this logic with the common sense of social development as the progress of the individual and interpersonal relations within the framework of the social organization of the historical process are ineffective. They are assigned the role of local public opinion, which has never been distinguished by special solidarity. A philosophical systematic analysis of quality and defects in its interpretation remains the domain of professional reflection.

It would seem that we are faced with a purely theoretical problem: what to call the actual quality of the product and what does the system of qualitative properties look like in the characteristics of the product? In fact, when applied in practice, it grows into an ideological problem: how is it permissible to see the quality of a product in the contemporary concrete historical circumstances of social cultural development?

Simplifying the understanding of the quality of a product by reducing it to its properties that ensure the profitability of production, makes production, and not the consumer, a system-forming factor in obtaining the “quality” of the product, which contradicts the quality of the developed economy of the “post-industrial”, “new industrial” and even “industrial” society. At the dawn of mankind, the consumer rejoiced at everything that he could produce. Manufacturing was the defining aspect of the relationship with the consumer. Today the market is considered the driving force behind the development of production. In the market, the initiative belongs to the buyer. Transition to the principle: "The buyer is always right!" involves determining the quality of the product by its consumer.

The economic dominant in characterizing the quality of a product is clearly not modern in a philosophical sense, but it expresses the essence of the bourgeois basis of the existing economy, therefore, both politically and ideologically it will be defended. Moreover, in a certain sense it is interesting, in particular, for solving the problem of mobilizing production potential to obtain a demanded product in

significant volumes, although the very quality of such a product will be conditional, “economic”. The concept of "economy class" was officially recognized as a development of the concept "produced for sale in Russia."

We have already emphasized that for 130 years, bourgeois economists have been creating models for the efficient production of quality goods in demand by the market, focusing on the economic content of quality. Having driven the movement of production into a dead end with economic models of quality, top managers, together with theorists - economists, who separated the profile of their scientific interest from the socio-cultural goals of the production of material goods, were forced to recognize the consumer not as a market anti-subject, but as a partner, an accomplice of the production process.

Recognizing a consumer as a companion is tantamount to including him in the production policy development team, although formally, because he remains in the same position as a counterparty. In order to change the understanding of quality, it is necessary to start improving production with the interests of the consumer, reflect them in the properties of the product, and then think about how to optimize the organization of its mass production.

Ultimately, in the beginning, a compromise solution is also acceptable, justified by the capabilities of production and the need to move by expanding these capabilities. Now the buyer basically remains a slave with the manufacturer - the master and the political protectorate of the interests of big business. The interests of the mass consumer are promoted by the footsteps of Japanese women, while the dominance in production of the interests of the companies is driven by the parade of the winners. The pace of movement is not comparable, there is no noticeable advantage in promoting consumer interests and is not yet expected.

The consumer with his interest in the quality of the product is not theoretically excluded from the development of strategy, tactics and advertising. We will refer to B.S. Aleshina et al: “For the quality strategy to be successful, both internal and external consumers must not only be satisfied and involved in the process that ensures this satisfaction, but also take a direct part in the continuous improvement of the quality of this process”, to this end, improved the Kaizyo system; replacing it with a new edition of Kaizen. Changes in the organization of quality management revealed the advantages of those countries where the mass consumer - who is also a production worker - feels more comfortable, feels his complicity in the development of production. In the second half of the 1980s, Japanese companies received 40 times (!) More proposals for improving the production process from their employees than US companies (40 million versus 1 million). It is also significant that over 90 percent of the proposals were used in one way or another.

The ideology of quality is being rebuilt to a new one - consumer orientation is extremely reluctant and half-hearted. The quality management system ISO 9000 (in the Russian Federation - GOST R ISO 9000-2011) was introduced into world practice 30 years ago. Its starting position (No. 1): "Product quality is a characteristic controlled object" sets the general direction in the understanding of quality. Quality is a product of production. Clause # 2 specifies the places of the participants influencing the quality of the product: "the purpose of quality management is to create products of such a quality level that meets certain established requirements and needs." To make it clear whose requirements and needs we are talking about, at the end of the paragraph we read, separated by commas - "consumer requests".

The interests of the consumer are taken into account, but on a leftover basis. They are remembered last of all, "if production reserves allow." In scientific and popular sources, one can find an explanation for this alignment of interests - technically complex products and their improvement are the lot of specialists. One gets the impression that specialists are not consumers.

In ISO 9000-2011, for the first time, the consumer appears at the top of the list. The first principle of the QMS states: “Customer orientation”. It is the consumer who declares the properties of quality. The status of the enterprise depends on how the quality of the offered product meets the quality requirements of buyers. The company must understand their current and future needs, fulfill their requirements and strive to exceed their expectations. But one should not rush to rejoice at the changes that have occurred. The quality management mechanism is still set to develop the quality of production technology, rather than to obtain a quality product. The quality of the enterprise, as before, is tested for maintaining the quality of the organization of production. The interests of the consumer remain for later. All leading international quality management quality registrars are represented in the Russian Federation: Veritas, British Standards Institute, Lloyd's Registrar, Supervision Society (TUV). In addition to them, in the quality management market, numerous home-grown and joint firms are offering their services in relation to the certification of the quality of production and products. The problem is not in finding the desired organization, but in the fact that they are all "sharpened" for production or a product out of context with the interests of consumers, which are quite specific and far from coinciding with the views of the quality of manufacturers.

The dialectic of the market that unites the producer and the consumer is simple - they are opposites that exist exclusively in unity, therefore, it is necessary to seek a balance of interests of both

subjects in order to give the production of quality goods a stable character that serves as protection from recessions and crises. Overproduction crises - classic for capitalism in the 19th and first half of the 20th centuries - have become history. They were replaced by financial systemic shocks. Experts are looking for a panacea in a quality, smart, lean production economy. “Historical experience testifies that with increasing attention to quality, emerging from crisis situations began in many countries. The large-scale crises in Japan and Germany in the late 1940s were overcome with the help of government policies aimed at improving quality. The crisis situations in the US and European markets that arose in the late 80s - early 90s forced not only individual corporations, but entire countries - Sweden, Great Britain, the United States - to pay attention to quality improvement as the only means of helping national the economy to resist the onslaught of competitors ”In solidarity with the above analysis of the economic history of the second half of the XX - the first two decades of the XXI centuries, we express our surprise at how it happened that when defining the latest social development through quality, the very approach to understanding quality was not radically modernized. The totality of the meaning of quality presupposes a revision of the content of the concept of "quality" and a new look at the factors that ensure the actual quality of activity and its product. The system-forming position of the quality factor in social progress also determines a new political attitude towards quality. An orientation of the development of production towards internal - not introduced messages is required.

Quality management must come from need. It is in it, and not in rewarding for quality work in the form of rewards, that the true beginning of the new economic policy. Promotion, of course, no one is going to cancel, they are swapped with motivation. Today, encouragement encourages the required quality of action, tomorrow the culture of a professional attitude to work will be completed with incentives. Movement is most productive precisely in the form of self-movement. External motivation is less effective. The remuneration should correspond to the quality of work and sustainably motivate work.

The change in the qualitative strategy of economic policy from the incentive to high-quality production to the formation of the need for a quality product is not another attempt to revive economic romanticism and not communist nostalgia for the need of a cultured person for work, as it might seem to those specialists who have reorganized from political economy to economics, reducing dialectical analysis to statistical, adapted to the volatility of modern production. We are talking about solving the system-forming problem of history - about the attitude of the individual to society and society to the individual, to whom which side of the given contradiction impresses more, but in principle, this is just a double spiral of social progress. A developed society is tested as a condition for personality development. In turn, a developed society is itself a product of the cultural activity of an individual.

The formal logical conclusion from the interdependence of the individual and society is obvious: it is necessary to build their relationship in harmony, on the basis of an awareness of mutual interest, bringing interests to the degree of a naturally necessary need (according to Epicurus' classification) in each other. Now we are going through the historical stage of a formally abstract awareness of the basic contradiction of development by the individual and the subjects that determine the policy. The individual and society seem to be rubbing themselves in motion, looking for points of mutual growth. Partly successful, there are many examples - mass production, freedom of access to education, sources of cultural development, political democracy, promotion of a culture of environmental management, solidarity in the fight against extremist aspirations, the joint use of scientific and technological achievements, strengthening the authority of the idea of tolerance.

A special place in this list should be taken by striving for a quality economy. The bottom line is this: opposites, by definition, are mutually alienated. Dialectical opposites, to which the individual and society belong, are distinguished favorably by the fact that the unity in their relations is laid down at the origin. It only needs to be brought to its general position by climbing from a formally necessary stage to an absolutely necessary one, loading the process with real content, demonstrating the benefits of interaction in detail. There is no other way of overcoming alienation objectively inherent in the relationship of opposites between the individual and society. Through the quality of activity - to the quality of social improvement. It is unnatural to alienate what is the real condition of your development. Under the conditions of classical capitalism, alienation was a prerequisite for achieving the power of capital, and the very political organization of society was openly adapted to the provision of the bourgeois state. Democracy has been adapted to the bourgeois social order.

The revolution of 1917 in Russia and the subsequent history of the USSR should be assessed not so much as national achievements, but as a turning point in the history of classical capitalism, the transition to post-classical one. The domination of private property and the advantages of capital remained intact, but significant changes took place in the social superstructure. Class antagonism gave way to social partnership. Access to capital has led to the emergence of various forms of associative use of it in production. Cultural progress was accompanied by an interest in the quality of life, a change in this very concept. World cataclysms, no doubt, did not just frighten the peoples of Europe and Asia. They pushed

the consciousness away from the abyss of extreme interests in resolving contradictions.

The alienation of the individual in work has not been overcome, but development objectively (society) and subjectively (personality) was carried out through interaction. There are certain conditions for the removal of alienation. And the new approach to quality-consumer-production is a milestone on the way of convergence of the main subjects of social life. It will force us to make adjustments to economic policy, return a systemic understanding of society, limiting the desire to sort social life “on the shelves”.

The qualitative vector of economic development, of course, will require additional costs, but the state with its economic instruments will also need to try to compensate them. And the market will certainly react positively to a quality product with its activity.

In our view, the very existence of private property in the variety of forms of its implementation is not a sufficient basis for alienation in the work of the individual. K. Marx, developing the idea of alienation of G. Hegel, apparently had in mind a certain way of organizing labor, associated with the absolutization of the domination of private property. Private property serves as a potential economic base for exploitation. But exploitation is not an immanent feature of it. Private property alone is not enough for exploitation. As for the opposite public (public) private property, which is controlled by the state and serves as a real subject of ownership, it also does not contain economic guarantees of overcoming alienation, which is not difficult to verify from the experience of domestic state monopolists.

One gets the impression that the economic grounds for alienation should be sought not in property, but in distribution. Economic contradictions are insurmountable, but they admit management, the task of which is to control the nature of contradictions, to keep them within the limits of insignificant, acceptable differences that do not test the existing unity of production for historical expediency.

It is appropriate to recall one more observation of G. Hegel, recognized by F. Engels as the most important in understanding the dialectics of development: "Everything reasonable is real, everything real is rational." G. Hegel was able to discover the grounds for the need for systemic transformations of social relations, including economic ones.

In development there are two states that are perceived in the form of existence, but differ within the general status of their manifestation - "real existence" - "reality" and "real existence" - "reality". These forms of existence are fundamentally different in basis. “Really existing” is based on the need to be in its own form, it represents an evolving reality. “Really existing” has passed the stage of its necessity, has ceased to be a factor of development, has lost its relevance. It slows down the development process. Since G. Hegel understood the development of thinking and society in the form of a movement towards absolute rationality, he identified the necessity of the real with reality.

You can, of course, squeeze every last ruble out of the developed assortment and well-established production technology. The question is: should I do this? Time moves forward in a certain mode, "in its own way", objectively tailored "schedule". You will not get into the rhythm, you will lag behind, you will cease to meet the changed requirements. The art of management - production management is no exception, it consists in the ability not to "fall out" of the present, then you will always do it in accordance with rationality. Reasonableness will protect you from most problems. Deming's "seven deadly diseases" will fit into one - not to fall out of the time cycle with the definition of goods and organization of production.

Only those who are able to mobilize human capital, to correctly focus financial and technical resources on solving this problem, are capable of doing this. Without the ability to control the "pulse" of time - to understand the specific economic and socio-cultural situation, the state of consumer interests, the real possibilities of production, there is no chance of gaining stability in the face of increasing competition in the market. Let us add one more addition - to the qualitative orientation of the development of production and the general conclusion will become clear: the path of economic rationality lies through the creation of actual conditions for the formation of the need for quality products. This need should be tested by the responsibility to the consumer as to himself. The ancient wisdom of Confucius: Treat others the way you wanted them to treat you is not outdated, on the contrary, following it has provided advantages in economic progress to the countries of Asia.

The specificity of achieving rationality in modern quality-oriented production is in the solidarity of human capital:

- internal solidarity of producers, their need for quality,
- external solidarity with the consumer, taking into account the interests of the latter,
- solidarity in understanding quality based on a combination of economic and sociocultural approaches,
- consistency and balance of economic policy of the state according to market orientation, the induction of the interests of quality in the development of the market by the instruments of the economic mechanism.

We have tried to define and summarize the basic conditions for achieving solidarity. As far as the analysis of literature data allows us, this is being done for the first time, therefore, clarifications and additions will be perceived positively.

Conclusion

So, what should be considered as necessary conditions for achieving a radical change in relation to the quality of production of a really high-quality product - the transition from the stage of external audit to the stage of internal guarantee, which is formed through the formation of the need to create a product of the required quality by the consumer:

- the presence of competition in the market of high-quality professional labor, so that there is a clear understanding of the need to work in accordance with the needs of the product market. In another way, the market will not allow to take a stable place on it;

- a significant increase in purchasing power. Reaching the level that allows you to choose the right product. A quality product cannot, by definition, be cheap, but it can and should be made available through market mechanisms;

- a high level of professional training of manufacturers, which is ensured on the basis of the formation of professional culture and national identity. The main thing should be the education of an attitude towards work as a matter that has dedicated its life. Expanded education of consumers, their perception as subjects of a common cause;

- overcoming the feeling of conscious and unconscious alienation of the ability of the individual in work and its products with the help of the following tools;

a) dachieving the symmetry of the quality of work and remuneration;

b) reduction to a reasonable ratio of the difference in the amount of remuneration of managers and performers, clarity of the grounds for such proportionality;

c) the dependence of remuneration on the dynamics of professional development and on participation in the improvement of the production process;

d) the all-round involvement of socio-cultural mechanisms to stimulate the individual to general corporate movement, to enter the command forms of movement.

e) sustainability of corporate activities;

f) priority of relationships of the type: "One for all, all for one." Active promotion of the command form of responsibility for labor results;

g) organization of systematic competition for the quality of labor;

h) striving for national and international recognition of the quality and range of products manufactured;

i) the formation of labor dynasties, participation in the distribution of profits;

j) understanding the quality of the product as a comprehensive assessment of the product;

k) awareness of the fact that it is “little things” that reveal the perfection of quality, therefore, the little things should be treated as a building material of quality.

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ON THE IMPORTANCE OF SOCIO-CULTURAL ORIENTATION ON QUALITY MANAGEMENT IN THE PRODUCTION OF IMPORT-SUBSTITUTING PRODUCTS AT ENTERPRISES OF SMALL CITIES IN THE SOUTHERN FEDERAL DISTRICT AND NORTH KAZAKHSTAN REGION

Abstract: *The article considers the achievement of a radical change in the attitude to the quality of production of import-substituting products at small enterprises of the southern Federal district and the North Caucasus Federal district. The authors have identified three areas of priority for their development, namely; leveling, and geo-economic incentive that ensures success in the sociocultural orientation of the population of small cities in the regions of SFD and NCFD.*

Key words: *quality, management, production, history, methodology, sustainability, need, consumer, priority, leveling, stimulating, geo-economic, socio-culture.*

Language: *English*

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Introduction

In the division of quality attributes into "primary" and "secondary" there was a rational principle associated with the specifics of the "second

nature" - things transformed from the natural state by human labor. The "primary" qualities of a product or its raw materials are determined by natural reality and are completely independent of man. "Secondary" features, on the other hand, are dependent on human labor. It is labor that reveals them, or creates them, therefore, the quality of objects transformed by labor should be determined with a human assessment. The inclusion of a person as a factor in the production of the quality of goods enhances the influence of the subject of labor on the quality of production and the quality of the goods produced. In this connection, the load on the control process increases.

Management is subordinate to the solution of the problem of sustainable production of a quality product. As in any task, it is necessary here:

- clearly define what is "quality"?
- understand what is specific to the quality of the product?
- to understand how the “quality” of commodity production and its mass production are related, to trace the mechanism of interaction of qualitative changes with quantitative ones.
- to reveal the systemic position of the problem of quality of mass production in the context of a developing economy.

Only after receiving answers to the listed questions, we will be able to productively investigate the problem: "How realistic is our desire to give a mass producer the need for a high-quality product result", in other words, "is it possible to sufficiently motivate the receipt of a quality product from within mass production?"

Main part

The allocation of quality as a goal created the most important prerequisite for human development - the ability to overcome the biological dictatorship and actively engage in the conditions of sustainability of one's own reproduction. The horizons of the consumer economy have been replaced by the perspective of a manufacturing economy. The scientific, including the economic, interpretation of quality, despite all the diversity due to the subject specificity of scientific knowledge and the normative nature of scientific knowledge, is one-sided. It serves as one more argument for the failure of the initial idea of positivism to deprive philosophy of independence, to give it applied meaning. Philosophy should not be grown out of the problems of a specific science, but should learn to use the arsenal of philosophical achievements in the process of specific scientific knowledge, so as not to fall into one-sidedness of ideas about the subject of research. The fact is that quality, on the one hand, shows the originality of the object and the degree of its development in space and time - this is an ontological aspect, and there is more scientific concreteness in it than philosophical, on the other hand, the quality traditionally identified with the essence requires epistemological and methodological analysis, which is dominated by philosophy. And here any attempt to replace it with a scientific approach will look like a surrogate and lead to undesirable results for scientific research. The noted costs, as a rule, do not appear immediately, which is accompanied by loss of time and unjustified financial costs. The problem of quality, both in theoretical and practical aspects, is key for management within the social movement. Let us allow ourselves a risky passage due to the complexity of the argumentation: social progress lags behind real social opportunities and, above all, the development of natural science and technical sciences based on natural science. The explanation for this discrepancy must be sought in the sphere of political and economic actions, simply put, in the miscalculations of management. Defects of management can be reduced to the influence of social contradictions, however, such a link will deprive us of prospects, since social contradictions are an essential and therefore irreparable feature of modern society. In addition, the specificity of the reality of socio-economic contradictions is different from the ideal reality of thinking. It is not given to them to find themselves in consciousness directly, it is necessary to undergo transformation into the facts of thinking - images, concepts, ideas. In scientific knowledge, this process is methodically regulated and controlled. It is in this that the interests of science meet the potential of philosophy. Scientific knowledge has three options for increment: trying to replace philosophy, which is unprofessional; use a simplified and therefore convenient experience of philosophical reflection; rely on those philosophical ideas that have been tested for millennia. Their value is not always obvious, and they themselves look unusual from the standpoint of traditional logic that fixes the relationship of the products of movement. The choice of ways of thinking in science has little to do with solving educational problems, teaching a scientist how to promote science, making discoveries is absurd. Scientific knowledge can be managed as long as it is carried out at the stage of rational thinking, and a breakthrough through the horizon of available scientific knowledge is being prepared. Then the irrational abilities of consciousness work, cognition goes to the level of inconsistency of thinking, its illogicality [2, p. 52]. The ability to manage in the classical interpretation is lost, but there remains a real perspective to direct the creative process. Moreover, there is a situation of intersection of scientific knowledge and philosophical recommendations, scientific knowledge matures to the need for philosophical support. One should not only get carried away with generalization in the understanding of science. Science is differentiated in detail, which is reflected in the methodological maturity of scientific knowledge and the position of sciences in scientific progress [3, p. 92-93]. In

scientific history, there have been and will be their own leaders who create authority for scientific knowledge. New time and the Industrial Revolution brought the science of nature and its transformation in the interests of mankind into the leading group. Summing up the results of the development of natural science, F. Engels wrote in 1894: “Natural science has advanced so much that it can no longer avoid dialectical generalization. But it will facilitate this process for itself, if we do not forget that the results in which the data of his experience are generalized are the essence of concepts and that the art of operating with concepts is not something innate and is not given together with ordinary, everyday consciousness, but requires real thinking, which also has a long empirical history, as long as the history of the empirical study of nature. When natural science learns to assimilate the results achieved by the development of philosophy over two and a half millennia, it is precisely because of this that it will get rid, on the one hand, of any special philosophy of nature standing outside of it and above it, and on the other, of its own, inherited from English empiricism. limited method of thinking ”[4, p. fourteen]. One of the founders of dialectical materialism was right. Natural science in the XX century. even more developed in the direction of the dialectical understanding of the world and its knowledge. It not only retained its leading position in scientific progress, but also publicly demonstrated its advantage. Statistics show that physicists and economists are almost equal in number among Nobel laureates. Success is strikingly different. Physicists were the first to "see" the dialectics of nature and to understand the need for dialectical thinking. It is no coincidence that the philosophy of science in the 20th century focused on physical discoveries. Economists, however, are even more bogged down in empirical research, content with the level of mathematical generalization and the specifics of economic mathematics, which mainly describe the products of movement and its statistically expressed tendencies. F. Engels' recommendations are interesting not only for the analytical generalization of the history of scientific thought, but also for the indication of the "technical" division of the process of the formation of scientific theory. The latter makes it possible to give it a universal scale with some correction in connection with the new conditions for the development of scientific knowledge that appeared later, when the “classical” stage of development was replaced by the “non-classical” or “post-classical” one. Formation of a scientific theory can be conditionally divided into several interrelated stages: 1. Obtaining initial knowledge that meets the requirements of scientific character. We are talking about scientific facts described according to certain rules, basically such facts are combined in the concept of "experience". 2. From experience, more precisely, from the facts that make up experience, building up the corresponding initial thoughts regarding their content. K. Popper calls them "basic statements" or "basic judgments." They are substantially limited by the singularity of the fact. A. Neurath calls the initial thoughts "protocol sentences". 3. Formation of individual concepts: from singular (basic) statements of individual origin to universal concepts. 4. Systematization of concepts, the establishment of their relations on the basis of a unifying (backbone) factor. 5. Determination of trends and patterns of change in the system in the process of its functioning in interaction with other phenomena of the general series. Differentiation of the subject process is one of the most important conditions for the effectiveness of influencing it in order to obtain a certain result. Management, including quality management, belongs to such actions. The quality you want is the end product. You have to go through a number of steps, each of which determines a specific attitude towards oneself. Quality management is not a linear, but a progressive process, which is a sum of quality states. To get the product you are looking for, you need to understand how to act in each specific case, at each stage of the movement towards the result. In epistemology, there is no common unambiguous understanding of the process of formation and growth of scientific knowledge, which in itself is not a negative result. On the contrary, discussions about the epistemological value of certain products of mental activity, the relationship between empirical and theoretical knowledge, the criteria of true knowledge, the possibility of absolute knowledge open up broad prospects for the cognitive process in science [5]. One cannot but agree with K. Popper, who argued: "The role of thinking is to carry out revolutions through critical disputes, and not through violence and wars, that the battle of words, not swords, is the greatest tradition of rationalism" [2]. Cognitive activity becomes more complicated as scientific research is immersed in the essential depth of movement of objective reality and its transformation in consciousness. In postclassical science, ideas about the place in scientific knowledge of facts, the significance of the empirical stage, understanding of the limits of truth of a scientific theory have changed. The listed changes indicate that scientific and philosophical knowledge tend to shift towards interest in the quality of technology of the cognition process, especially to that part of it, which determines the systemic value of the product obtained in cognition. If earlier the need for scientific knowledge in philosophical comprehension was mainly limited to the limits of solving problems of the ontological and methodological class, then in recent times the relations between science and philosophy of science are increasingly concentrated in the epistemological series, which makes it even more difficult to solve emerging problems, the number of which does not decrease as the some progress. One cannot but reckon with this - the urgency of the tasks at hand obliges. At

the same time, there is a danger of overestimating the post-non-classical originality of scientific progress. You cannot get carried away with the specifics of the private. This creates the danger of absolutizing the individual and opposing it to the general process. Scientific knowledge remains within the boundaries of its qualitative definiteness, the ways and means of its implementation are being improved, including the understanding of the technique for assessing the truth of scientific knowledge. Development follows the well-known path of dialectical negation in the form of "withdrawal", which does not break the continuity in the movement. The reason is banal - there is nothing in our thinking except analysis and synthesis, induction and deduction, comparison, abstraction, idealization, thought experiment and modeling, just as nothing is given beyond the logical rationality and irrationality of intuition to our consciousness. The forms of knowledge and thinking are also fixed in the final set: “fact-image”, “fact-statement”, “concept”, “hypothesis”, “theory” of various scales and traditional thinking tools involved in the construction of theory - judgments and inferences. The new, says the wisdom of common sense, "is the forgotten old." I would like to add the words of I. Goethe to the aphorism: “Everything clever has already been changed; you just have to try to change your mind again. " What has changed with the transition of scientific progress to the stage of post-classical development? 1. The interpretation of the meaning of facts has changed in the light of their influence on the truth of the theoretical generalization. The contradiction of separately taken facts to the current scientific explanation is incorrect to consider as an argument for its inconsistency. Only if an alternative explanation is developed on the basis of such facts, the question of the falsity or limitations of the existing theory will arise. The position is important, but it is irrational to qualify it as a breakthrough methodological achievement. The actors are the same - facts and theory, the circumstances of their interaction are specified. 2. The idea of the criterion of truly scientific knowledge, which served as the support of classical science and was supported by neo-positivism at the beginning of a new stage, was subjected to critical analysis. The principle of “verification” was supplemented with “falsification” [3, p. 112]. The aspiration of K. Popper and his associates to radically turn scientific knowledge towards a new criterion gave a partial result. K. Popper's innovation is undoubtedly interesting, his idea of defining knowledge through their falsifiability seems even more fruitful, but “falsification” did not replace “verification”, as well as “falsifiability” - “verifiability”. In scientific knowledge, we did not go through unification, but preferred the previous movement through action, depending on the specificity of the situation. 3. The debate, which began in the works of F. Bacon and R. Descartes, about the relationship between the empirical and the theoretical in scientific methodology, did not reveal the winner either. Modern adherents of inductionism and rationalism limited themselves to successes in the development of particular problems, to the logical purification of the technology of scientific knowledge. It is interesting not so much what distinguishes the opponents, but what they get in the form of a general conclusion - the principle of the increasing cognitive value of a scientific theory. Differentiation of science also led to diversification within sciences, which creates the conditions for the devaluation of scientific theory in the context of recognizing the equality of alternative judgments and strengthening the position of the hypothesis in the development of scientific knowledge. On the whole, the post-classical stage confirmed the importance of the main provisions of the dialectical method - the ideas of contradictory development, continuity in development and the concreteness of truth in connection with development. F. Engels's idea that the quality of scientific knowledge is characterized by the demand for a dialectical understanding of the subject of thinking has successfully passed the test. At the same time, one always has to remember about the autonomy of science in relation to philosophy. The presence of a common dialectical foundation in the world outlook should not create illusions of a common attitude towards dialectics. There is no such unity in philosophy itself. A scientist tries on philosophical thinking in connection with his professional reflection, and as a philosopher he usually remains a scientist, a scientist. His scientific analysis always has a priority. The paths of the scientist and the philosopher cross, but they do not coincide. To each his own. The logical in scientific knowledge appears in the historical movement of scientific thought, the obvious for a philosopher is not at all so for a scientist. Features of scientific knowledge are advancing in relation to the logic of thinking. K. Popper suggested to scientists: “Theories are networks designed to capture what we call the“ world, ”for understanding, explaining and mastering it. We strive to make the cells of the networks smaller and smaller ”[2, p. 82]. The overwhelming majority of researchers of the economic, social, and political movement still go from the facts, most often remaining at the level of empirical processing of the obtained material, creating the impression of a scientific approach. Psychologically stability in the science of empiricism is not difficult to understand. Cognition of n-essences of phenomena, without which theoretical conclusions are impossible, has become very difficult and problematic. Empirical research is much more accessible, it opens up a real opportunity through the improvement of methods of description and verification, the active use of mathematical measurement of results to obtain a basis for thought. As for the level of generalized assessment, its

epistemological value, then all this already refers to the next stage. The main thing has been done: the subject has been described and turned into a scientific phenomenon, has become a "protocol provision". The name of the researcher is inscribed in the history, if not of science itself, then of scientific knowledge. Such scientists also have ideological support. There will always be politicians and financiers satisfied with the "strict objectivity" of scientific analysis that does not touch the essence of the social movement. Let us recall how the philosophers of the late 18th and early 19th centuries. actively developed the socio-economic characteristics of the bourgeois mode of production, convincing society of a bright future based on the development of capitalism. But as soon as the contradictions that were unsolvable in the depths of capitalism were discovered, the idea of development was pushed into the background so that it would not spoil the picture of progress and provoke the question: what should replace capitalism? The very term "capitalism" has kind of evaporated, at the same time the term "socialism" continues to exist in one form or another, in particular in the names of political parties, despite the verdict to be a utopia. The public consciousness makes a special demand for the quality of economic research. The interest is quite natural, because the quality of production management and, to a large extent, the quality of people's life itself depends on the development of economic science [5, 6]. The object of economic science is the production of material goods and the establishment of production relations as a process of regular development and transformation of qualitatively defined states - modes of production. Each mode of production can be considered as a subject of economic knowledge and be reflected in the corresponding economic theory, which is a part of economic science. Economic science should not be replaced by either economic theory or macro or microeconomics. None of the physicists, chemists and biologists have shown any desire to replace science with a part of it. Natural science is based on universal laws that determine the general order of existence and coexistence of the sciences that form it, each of which has its own structure. The signs of science are objectively determined requirements. Under the conditions of the complexity and contradictory nature of cognition, science admits the existence of a different explanation of factual material within the framework of the formation of a generally significant result. Consideration of the bourgeois mode of production as an industrialized economy is specific if the ultimate goal is not to "dissolve" capitalism in such an economy. The industrially developed economy still coincides with bourgeois production, however, “industrialized economy” and “capitalism” have different qualitative status. “Capitalism” is a qualitatively different “mode of production” regulated by specific production relations, and “industrialized economy” is a definition of a characteristic form of development of production, which may well find, over time, non-capitalist embodiment. Whatever the future of economics, it will remain a political economy, which is not to the liking of the apologists of capitalism. In order to prevent a historical approach to capitalism, they are ready to neglect the conditions of scientific knowledge. For the objectivity of economic analysis, it is necessary to postulate the following: history will not stop at capitalism; capitalism is the mode of production without which it is impossible to obtain mass production on an industrialized basis; the future of economic theory is associated precisely with the further progress of industrial production, the improvement of its level, which is already happening now in the forms of integration and globalization. From which follows the conclusion on the directions and principles of developing a methodology for managing the quality of economic activity. First, we will try to identify the specifics of quality in relation to activities. It is customary to call quality a generalized characteristic of the properties of a phenomenon that reveal its essence. To be more specific, let us clarify: quality is a state of a phenomenon that ensures its functioning in a given nominal volume. Secondly, the quality of the phenomenon produced by the activity differs from the quality of a natural phenomenon by the presence of properties that objectify human needs. If such a phenomenon belongs to the economic series, then its qualitative characteristics also include the needs of the market, reflecting the public demand for the quality of this product. Thirdly, quality presupposes its own “qualitative” certainty; the degrees or levels of quality - “qualitative states” - differ. They are steps in the quality management movement and serve as the basis for assessing the quality of activities aimed at quality management. The history of quality management shows the ascent through the stages of quality states of productive activity. Fourthly, production and management of all its aspects, including quality management, should be perceived systematically, that is, understood as production in combination with marketing research and the need for development in order to ensure the real competitiveness of the product and the enterprise itself. Fifth, quality management will be effective only when a high level of production organization is achieved. Whether it is included in the quality management process or evaluated as a necessary condition is the problem of economics. Sixth, the quality of production is determined by the level of labor productivity, mobility in reorientation, assortment, manufacturability; therefore, quality management should aim to increase labor productivity and improve the technological characteristics of production. What matters is not so much what we produce, but how we do it and what are our reserves to do it with less cost, faster and better. It is impossible to develop an ideal theory of quality management,

quality management is a concrete historical activity, conditioned objectively and in the form of a concrete truth. Its universality is represented only by the correspondence to a number of general guiding methodological provisions, abstract enough to form from them the form of a working theory, but necessary for its effective construction. Universal recommendations do not give the impression of being a tool for a specific practical action, for the reason that they have a different function. They serve as vectors and constraints for design activities. Anyone who seeks to minimize the costs of design must master the art of combining freedom and obligation in creativity. No matter how impressive the achievements of "human capital" are, the economy is doomed to be a measure of material production and the dominance of objective relations between the factors of production. Economic reality sets the conditions for economic creativity. No matter how a society is called - "consumer", "informational", "postindustrial", it remains a structure built on the basis of material reproduction and the objectivity of the laws governing this process. Improving the theory of quality management in economic activity is based on the real foundation of the history of management and the methodological premises summarized above in the text. The history of quality management confirms the scientific and dialectical nature of this activity, once again emphasizing the importance of methodological equipment for the movement of economic knowledge towards theoretical generalization through mastering the dialectical way of thinking. In the area of scientific interests, quality management was found in Antiquity at the "axial time". Otherwise, one cannot explain such a fact as the desire of Archimedes to develop a theory of the simplest tools - a wedge, a lever, a block, a screw. Archimedes set himself the goal of increasing labor productivity by scientific development of their optimal design and methods of use. But in the era of Archimedes there was no science and mass production, so his contribution to social development was limited to the sphere of theoretical description. Archimedes laid his "stone" in the construction of science, it is quite possible to admit the use of Archimedes' conclusions in the history of handicrafts. Shepherding and agriculture were determined by the natural order, the demand for scientific knowledge of peasants and shepherds hardly existed. Craftsmen created a "second nature" in the interests of man, they had to do what could not be obtained naturally. The expression of social need in the quality of work appears to have arisen in the history of handicraft. At this level of division of labor, human art began to compete with the “art” of the natural order. However, the scale of handicraft labor, the autonomy of the guild organization of production, and limited consumer demand did not stimulate scientific progress. The pre-scientific history of quality management ended with the Industrial Revolution. All the socio-economic conditions have taken shape for a qualitative transition to scientific regulation of production and production quality management: manual labor has been replaced by mechanized labor, the shop organization has been replaced by a factory, common sense and work ingenuity have supplanted the advantages of scientific theory. But it took time for the scientific approach to production to mature and prove its versatility. Everything became clear in the second half of the 19th century. The modern stage of quality management should be counted from the public awareness of the idea of the value of standard quality (1870s, S. Colt factories). Scientific development of the theory of quality management has activated the inclusion of philosophical reflection in the process. BS Aleshin et al. Distinguish four "overlapping and continuing phases" in the formation of the philosophy of quality, emphasizing their dialectical nature, development "in full accordance with the law of dialectics" [6, p. 22]. At the beginning, there was a “rejection phase” rooted in artisan history. In recent times, it has been modernized by the efforts of G. Leland, G. Ford, F. Taylor, A. Fayol and M. Weber [7, 8]. The Ford-Taylor Manufacturing Quality Management System was in use until the middle of the 20th century. This system was built on the emphasis on control functions. Already in the 1920s. in high-tech production, the share of inspectors reached a third of the staff. A further increase, inevitable due to the complication of technology, would lead the system to self-destruction. Improvements in quality have been accompanied by a disproportionate increase in quality assurance costs. With the concept of Ford Taylor, it was not possible to achieve at the same time an increase in production efficiency and product quality. What is natural for quantum mechanics, turned out to be fatal for political economy (economic policy). The inconsistency of the “rejection phase” initiated the search for other directions of quality management organization. In the depths of the first phase, the second arises - the “phase of quality management” associated with the activities of V. Shukhart. The central object is the production process itself - its sustainability and the continuous decrease in variability. Statistical analysis is of particular importance for Shewhart. According to Shewhart's plan, it is not necessary to look for the guilty, but to try in every way to activate the professional potential. Do not oppose and separate employees, but unite them into a team. In Shewhart's work, the worker from Taylor's "screw of the machine" turns into a partner, his status rises, and his motivation increases. Quality control departments and centers gave way to the audit service, which focused on quality control of samples. The introduction of V. Shukhart's system led to increased efficiency and improved quality, created a real basis for market globalization. At the same time, the “fatal disease” remained. The understanding was preserved that the production process itself, by its objective parameters,

limits the yield of suitable products. Reaching a certain limit activates the tension between the increase in production efficiency and the cost of product quality. Let us remember that quantity does not go directly into quality; it affects the quality state. An increase in the number of products leads to a decrease in quality. Even the leaders of the automotive industry regularly recall tens and even hundreds of thousands of cars due to the poor quality of components and systems. The third phase - "continuous improvement of quality" - was born in the depths of the scientific and technological revolution of the 1950s – 1960s. V. Deming is deservedly called the initiator. We do not know what kind of philosopher Deming was, but, no doubt, at least at the level of scientific intuition, he was aware of the growing importance of the subjective factor in the development of production, its transformation into "human capital" and tried to reflect this side of social progress in quality management. Deming proceeded from the fundamental idea of the human origin of production and therefore the humane essence of labor. Labor not only helped homo rise to the level of sapiens, to become homo sapiens, labor remains the main way of expressing rationality. Reasonableness of a person is called upon to introduce a humanistic principle into the organization of production. In V. Deming's understanding of the direction of improving quality management, there was a restoration of the need for economic science in the tools and judgments of philosophy, characteristic of classical political economy. The teaching of W. Deming, more than past concepts, corresponds to the understanding of systems thinking. At the same time, in his reflection, one can clearly feel the influence of contemporary European philosophical thought - phenomenalism, existentialism and pragmatism. Deming formulated the theoretical basis of the quality management program in the form of three pragmatic axioms:

1) any activity is a process and involves improvement;

2) the production system has two possible states - stable and unstable, therefore, first of all, it is necessary to solve fundamental problems of strategic importance;

3) the responsibility for all violations lies with the top management - top managers.

Deming presented the implementation of the program step by step in "Fourteen Points", defined "difficulties and false starts", tried to spread the physical concept of a chain reaction in the section "Chain reaction according to Deming", defined a total systemic "principle of continuous improvement", "Deming cycle" and warned "Seven deadly diseases" for business. The implementation of V. Deming's program in Japan was especially successful. In the early 1950s. the American specialist was invited to give lectures in Japan, where he found a significant number of like-minded people. Deming's humanistic credo perfectly fit into the Japanese national mentality. K. Ishikawa, one of those associated with the flourishing of the Japanese economy, actively promoted Deming's ideas. The Japanese were also impressed by the fact that the development of the Deming program did not require large expenses. Deming's theory was developed in the works of J. Juran, F. Crosby, A. Feingenbaum [9, 10]. By minimizing the cost of organizing quality production, Deming did not theoretically solve the problem of reducing economic efficiency as quality improved, but he did find a practical solution. The problem remained, but it ceased to be relevant in a practical aspect. Production has reached a practically acceptable level of the ratio of these parameters, which are key for the development of economic policy. Second half of 1960s - 1970s turned out to be the time of mastering the scientific and technological revolution. Science has become an immediate productive force. The understanding of production has also expanded. The time has come for the special status of the stage of the birth of ideas and their design development. A new chapter was added to the doctrine of quality management - "design quality". It took shape in the "quality planning" phase (G. Taguti, A. Feigenbaum). By the 1980s. the formation of the concept of Total Quality Control (TQC - Total Quality Control) was completed, international standards ISO 8402, then ISO 9000 appeared. Achievements of scientific and philosophical understanding of quality and its management realized themselves and moved on to the stage of their improvement in the context of socio-economic, political and scientific -technical changes. Summing up the analysis of the history and logic of the development of economic doctrine on the theoretical foundations of quality management, the following conclusions can be drawn: 1. The construction of economic theory was carried out depending on the development of the philosophical concept of quality, more precisely, on how the philosophical doctrine of quality was perceived by the consciousness of economic management specialists. Before the crisis of 2008, economic research did not reach the level of open demand for the ideas of Karl Marx, but the excitement regarding Capital, which Europe saw in the late 2000s and early 2010s, matured and was inevitable. The only pity is that in Capital, the majority were looking for something that was not quite what they needed to look for in the first place - a dialectical way of thinking. Interest in the research of K. Marx was frankly pragmatic. 2. Understanding of quality and the development of the concept of its practical application in quality management of production activities went up in the direction of the requirements of dialectical thinking, perhaps spontaneously, by "rejecting" the rest due to failure. The dialectical view of quality management among managers-economists was formed not from the developed philosophical theory and demonstration of

its advantages in "Capital", but from reflection on the local practical results of production development. The dialectical approach was discovered by economists themselves, like the shoemaker I. Dietzgen or the naturalist G. Darwin, but the success was undoubtedly, however, at the expense of significant costs. After the ascent, economic science descended and discovered its humanitarian foundations. It turned out that quality management should be built not on the basis of technical standards, but on the disclosure of the dominant "human capital". 3. The history of teaching about the fundamentals of quality management, having traveled a century and a half, has reached modern perfection. History has practically projected the methodological figure of quality in its present sense. In dialectics, this corresponds to a spiral of development. The next step is the ascent of economic science to the next stage, and, as Bulgakov's professor Preobrazhensky said, the revolution is valid only that which first occurs in the head, and then in practice. It is necessary to revise or look in a new way at the concepts of "quality" and "quantity", "production efficiency", to introduce new concepts into the characteristics. The directions of the movement of thought have already been partially determined: the allocation of "internal" and "external" qualities, insurmountability within the framework of the existing concept of the effectiveness of production quality management, the contradiction between efficiency and costs for quality, the need for "reasonably rigid" regulation of relations in the market, etc. 4. The ability to manage quality has grown into a global problem, the realization comes that only well-organized production is capable of solving other global problems - poverty, water supply, increasing environmental stress. In theory, successes in managing the quality of production in international cooperation can be the beginning of the transition from confrontation in politics to mutual understanding. There are more and more arguments in favor of the emergence of a new civilization - "quality civilization", in which the principle of "totality of quality management" will be completed by the principle of universal availability of quality. Understanding that economic management, which does not take into account the priorities of the humanitarian and socio-cultural components of social progress, is not capable of being consistently effective, strengthens the position both among systemically reflective specialists and among managers of production structures [11]. The economy, with all its basic significance, was, is and remains under the systemic, subordinate to the laws of social movement, designed to help overcome the alienation that has developed in commodity production through the optimization of the living conditions of people, revealed the advantages of the economic and geographical approach in strategic management and identified three vectors of priority development of the regions: "Equalizing (redistribution of resources to equalize living standards), stimulating (creating conditions in the region with specific advantages), geoeconomic (ensuring security through costly development of border and strategically important territories" [13, p. 7]. The vector of modernization of the approach to management is set. Time has passed, and it remains to recall that "time is our living space", therefore, lost time, untimely actions inevitably lead to the loss of the advantage of an advantageous position in a competing world.

Conclusion

The theory of quality management has its own historical prerequisites, the main one of which is the discovery by the Englishman T. Mann and the Neapolitan A. Serra of the importance of the division of labor for the development of production. It is the division of labor within the enterprise and between enterprises that determines the program for organizing production, opens up the prospect of active inclusion of the subjective factor in the regulation of the production process. At the same time, the requirements for it are being developed. Why did this discovery have to wait until the 17th century? The division of labor began much earlier, but it was restrained by a guild, essentially a closed form of organization, when within production the main canon was the preservation of existing equipment and technology. The production of many consumer goods is still advertised as pointing to the advantages of centuries-old unchanging conditions and manufacturing technology. The lack of change in production is seen as a merit of product quality management. The dialectical view of development as a process of bifurcation of the one and the struggle of opposites is clearly expressed in the polarity of goals in the theory of quality management. The advantage of dialectics lies precisely in the fact that it helps to avoid one-sidedness in cognition and creativity. We have two seemingly mutually exclusive views on quality. One assumes the development of the division of labor to improve the organization of production, the other, on the contrary, requires a conservative attitude to the achieved organization of production. In fact, both approaches are expressions of their common essence. If the conservative attitude to the quality of production is presented on a national scale, then we will receive the sum of various industries, formally united by a common product. This is the history of quality management in the production of beer, wine, coffee, cocoa, spices, spices, decorative items, and more. The division of labor is carried out in various forms. Such diversification provides him with the stability of functioning as a factor in the development of production and the basis for obtaining a quality product. It is also obvious that the theory of quality management is based on the organization of work.

With the transition to the scientific organization of labor, production quality management became more effective, the relevance of the latter production acquired social significance, became a socially demanded problem, which determined the increase in scientific interest in it.

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ORGANIZATION OF ACCOUNTING IN MODERN CONDITIONS

Abstract: *The issues of organizing accounting in modern economic conditions are considered. The factors and elements of the organization of accounting are analyzed.*

Key words: *accounting organization, factors and elements of accounting organization.*

Language: *Russian*

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ОРГАНИЗАЦИЯ БУХГАЛТЕРСКОГО УЧЕТА В СОВРЕМЕННЫХ УСЛОВИЯХ

Аннотация: *Рассмотрены вопросы организации бухгалтерского учета в современных экономических условиях. Проанализированы факторы и элементы организации бухгалтерского учета.*

Ключевые слова: *организация бухгалтерского учета, факторы и элементы организации бухгалтерского учета.*

Введение

Проблемы организации бухгалтерского учета в нашей стране начали наиболее активно обсуждаться в конце 90-х годов прошлого века. Построение рыночной экономики потребовало существенных изменений в методологии бухгалтерского учета. Так, в отношении бухгалтерского учета государство стало устанавливать лишь общий порядок его ведения, обеспечивая всем предприятиям равные условия на рынке. Вопросы же, связанные с конкретными условиями бухгалтерского учета, были переданы непосредственно организациям. В результате сложилась противоречивая ситуация. С одной стороны, организации заинтересованы в раскрытии высококачественной информации о своей деятельности, с другой стороны, большинство коммерческих предприятий практически не имеют возможности формировать документированную систематизированную информацию об объектах бухгалтерского учета. Отчасти это объясняется тем, что с исторической точки зрения довольно часто вопросы экономии ресурсов не считались приоритетными. Кроме того, важную роль играет сохранившийся с советских времен менталитет российских бухгалтеров, привыкших к тому, что вся их деятельность полностью регламентирована законодательно-нормативными документами. Они готовы скорее следовать правилам, нежели брать на себя хотя бы минимальную ответственность и применять творческий подход к решению учетных проблем.

Международный опыт говорит нам о том, что государство не может эффективно осуществлять регулирование бухгалтерского учета, исходя из информационных потребностей конкретных субъектов экономики, поэтому в большинстве стран применяется двухуровневое регулирование бухгалтерского учета: на первом уровне – положения законодательства по бухгалтерскому учету, на втором – учетные стандарты и документы конкретных хозяйствующих субъектов. Регулирование бухгалтерского учета проводится в интересах заинтересованных пользователей, главными из которых в таких странах, как США, Англия, Голландия и др., являются инвесторы и кредиторы.

К наиболее значимым факторам организации бухгалтерского учета бухгалтера относят следующие:

1) внешние факторы организации бухгалтерского учета:

– требования законодательно-нормативных документов к организации бухгалтерского учета, к порядку ведения бухгалтерского учета активов, капитала и обязательств, а также к составлению финансовой отчетности;

– содержание этических норм в бухгалтерской профессии;

– информационные потребности внешних пользователей;

2) внутренние факторы организации бухгалтерского учета:

– миссия бухгалтерского учета на предприятии;

– требования руководства и финансовой службы к структуре и содержанию бухгалтерской информации;

– требования службы внутреннего аудита к совершенствованию учетной работы на предприятии;

– экономическая целесообразность затрат на подготовку и представление бухгалтерской информации пользователям.

Исходя из положений РЎз закона от 13 апреля 2016 г. № 404-ЎРҚ «О бухгалтерском учете», в Республикии Узбекистане законодательно установлено рамочное регулирование ведения бухгалтерского учета на предприятии. Установлено требование наличия бухгалтерии в одной из перечисленных в законе форм. Кроме этого, предъявляются требования к лицу, ведущему учет в акционерном обществе, ценные бумаги которого допущены к обращению на торгах фондовых бирж, а также к порядку разрешения разногласий с директором по поводу информации, предоставляемой в регистрах бухгалтерского учета, о достоверности движения денежных средств и финансового результата на отчетную дату.

Принципы и правила формирования бухгалтерской информации приведены в Положениях по бухгалтерскому учету. Следует сказать, что они носят рекомендательный характер, допуская вариантность ь в выборе оценок и способов учета. Планом счетов регламентируется порядок ведения бухгалтерского учета активов, имущества и капитала.

Построение рыночной экономики привело к изменению роли бухгалтерского учета в общественной жизни. В результате бухгалтерская информация стала влиять на информационную и экономическую безопасность, как самого предприятия, так и пользователей его информации в масштабах всего общества. В этих условиях стали предъявляться особые этические требования к лицам, ведущим бухгалтерский учет. Информация об этих требованиях сведена в Кодекс этики, значение которого состоит в поддержании высокой моральной репутации профессии.

В настоящее время известно, что бухгалтерская информация предназначена для оказания всем ее пользователям помощи в принятии эффективных управленческих решений. Но одновременно удовлетворить информационные интересы внешних пользователей сейчас не представляется возможным. Поэтому можно согласиться с мнением профессионального сообщества бухгалтеров, что основными пользователями отчетности сегодня являются инвесторы.

Рассмотрим основные элементы, влияющие на требования рациональной организации учетной работы на предприятии.

Положение о бухгалтерской службе предприятия. К сожалению, нормативного документа, который бы четко определял требования к организации бухгалтерской службы в организации, сегодня нет. Отдельные положения есть в законе «О бухгалтерском учете», но их явно недостаточно для создания бухгалтерской службы. Поэтому организации необходимо создать внутренний нормативный документ, определяющий следующие основные элементы:

– миссия бухгалтерского учета на предприятии;

– структура главной бухгалтерии и подчиненность ее руководству организации;

– функции и порядок взаимодействия бухгалтерской службы и других подразделений организации;

– должностные обязанности бухгалтеров и главных бухгалтеров;

–внутренний распорядок и ответственность работников бухгалтерии, и др.

В целом этот документ имеет не малое значение для организаций, так как устанавливает порядок работы бухгалтерской службы в конкретных рабочих условиях организации и обусловливает ее ответственность за информационное обеспечение отдельных подразделений организации. В результате результативно работающая бухгалтерия позволяет высшему и среднему менеджменту оперировать качественной информацией и получать соответственно действенные управленческие решения. Учетная политика предприятия. Потребность в учетной политике появилась с внедрением в нашей стране нового режима регулирования бухгалтерского учета, принятого в экономически развитых странах.

Роль учетной политики в организации всего учетного процесса огромна.

Действующие законодательство в ряде случаев допускает выбор одного из нескольких способов организации учета, а иногда даже устанавливают обязанность разработать соответствующий порядок самостоятельно.

С введением нового налогового кодекса в 2020 году все налогоплательщики обязаны утвердить учетную политику для целей налогообложения (далее по тексту УПЦН) до 1 апреля 2020 года. Под налогоплательщиками подразумеваются юридические лица и индивидуальные предприниматели, которые обязаны вести бухгалтерский и налоговый учет.

То есть теперь у каждого предприятия должна быть учетная политика с обязательным разделом «для целей налогообложения» или отдельный документ.

Для чего нужны обе учетные политики?

В качестве «классического» примера можно привести выбор метода начисления амортизации: ставки износа основных средств для целей бухгалтерского учета и налогообложения могут быть разными.

Предположим, что вы купили оборудование, очень интенсивно его используете и знаете, что оно проработает максимум 4 года. Для того чтобы объективно рассчитать себестоимость для целей бухгалтерского учета вы устанавливаете норму износа 25% в год.

Ставка амортизации для целей налогообложения составляет 15%. Возникает разница в 10% (25% — 15%), на эту сумму вы фактически увеличиваете расходы и уменьшаете налоговую базу по налогу на прибыль. Поэтому для целей налогообложения при расчете налога на прибыль вы будете использовать ставку 15%, соответственно уменьшая расход и увеличивая сумму налога на прибыль.

Учетная политика выполняет несколько функций:

Руководство по организации и ведению учета внутри компании – правила, установленные для всех работников организации, принимающих участие в учетном процессе. Особенно это актуально для организаций, имеющих обособленные подразделения, самостоятельно ведущие учет, а также при смене главного бухгалтера. В этом случае качественная учетная политика часто выступает единственным способом организации унифицированного учета.

Грамотно сформированная учетная политика – весомый аргумент для предотвращения или, по крайней мере, решения в свою пользу **споров с налоговыми органами**. Не секрет, что чем подробнее (в случае отсутствия противоречий с действующим законодательством) учетная политика определяет правила ведения учета в каждом конкретном случае, тем сложнее проверяющим оспорить правомерность их применения.

Учетная политика – мощный инструмент оптимизации. Здесь уместно оговориться, что учетная политика может обеспечивать не только оптимизацию налогообложения, но и в очень многих случаях оптимизацию учетного процесса с точки зрения снижения его трудоемкости, повышения качества представления и группировки учетной информации.

Учетная политика – это комплексный документ, он включает в себя:

рабочий план счетов бухгалтерского учета;

формы первичных учетных документов, применяемых для оформления хозяйственных операций, по которым не предусмотрены типовые формы первичных учетных документов, а также формы документов для внутренней бухгалтерской отчетности;

формы и порядок составления налоговых регистров, разработанных налогоплательщиком или налоговым агентом самостоятельно, если иное не предусмотрено налоговым законодательством;

порядок проведения инвентаризации и методы оценки видов имущества и обязательств;

выбранные налогоплательщиком методы отнесения затрат на расходы в целях исчисления налога на прибыль, а также отнесения в зачет налога на добавленную стоимость;

порядок контроля за хозяйственными операциями, а также другие решения, необходимые для организации бухгалтерского учета;

должностные лица, ответственные за ее соблюдение;

порядок ведения раздельного учета в целях налогообложения в случаях, когда обязанность по ведению такого учета предусмотрена настоящим Кодексом;

политика определения хеджируемых рисков, хеджируемые статьи и используемые в их отношении инструменты хеджирования, методика оценки степени эффективности хеджирования в случае осуществления операций хеджирования, а также других финансовых рисков;

нормы (методы начисления) амортизации по каждой группе и подгруппе активов.

Учетная политика формируется лицом, на которое возложено ведение бухгалтерского учета. Приказом руководителя утверждается следующее: – рабочий план счетов бухгалтерского учета, необходимый для ведения бухгалтерского учета организации; – формы регистров и первичных документов бухгалтерского учета; – документы для внутренней бухгалтерской отчетности; – способы проведения инвентаризации; – порядок оценки активов и

обязательств; – правила проведения документооборота; – способы контроля операций хозяйствующего субъекта и др. Следует отметить, что при формировании бухгалтерской информации и отражении ее в отчетности необходимо учитывать действие бухгалтерских рисков, соответствующих конкретным условиям хозяйственной жизни. Перечень параметров учетной политики является открытым, что позволяет организации определять ее состав и структуру в соответствии с требованиями, делающие её полезной и достоверной для внешних и внутренних пользователей.

Современная система представления финансовой отчетности не ограничивает объем информации, которую организация хочет предоставить заинтересованным внешним пользователям. Поэтому организация должна оптимизировать информацию и предоставлять ее с максимальной выгодой для предприятия. Очевидно, что организация будет заниматься вопросами качества отчетности, если у нее будут внешние пользователи отчетности, принимающие управленческие решения, например, по поводу инвестиций, предоставления кредитов и займов, продажи товаров и т. д. Присутствие реальных внешних пользователей стимулирует появление заинтересованности у руководства предприятия в формировании достоверной и уместной для этих пользователей финансовой отчетности.

Система внутреннего контроля. Данная система предназначена для внутреннего контроля деятельности организации. Она является формой обратной связи и предусматривает поддержание организации в системе непрерывной деятельности. В дальнейшем для совершенствования организации бухгалтерского учета в нашей стране предлагается разработать ряд документов, включающий Положение о бухгалтерской службе организации, Учетную политику организации в целях бухгалтерского учета, Учетную политику организации в целях налогового учета, Учетную политику организации в целях управленческого учета и Положение о системе внутреннего контроля организации. Эти документы должны разрабатываться в зависимости от цели предприятия, характера действия, масштабов бизнеса, наличия конкретных объектов учета, характерных рисков его деятельности и т. д. Для широкого внедрения в практическую деятельность бухгалтеров современных методов организации бухгалтерского учета необходимо коренное переосмысление традиционной методологии ведения бухгалтерского учета и составления отчетности.

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POPULATION INVOLVEMENT IN BUSINESS AND FAMILY BUSINESS DEVELOPMENT IN REGIONS IN THE CONDITIONS OF THE GLOBAL CRISIS RELATED TO THE COVID-19 PANDEMIC

Abstract: *The article discusses the concepts of family business, entrepreneurial activity and the issues of their analysis. The theoretical and practical aspects of the further development of family business are studied, the features of their organization are highlighted. The practical aspects of supporting these enterprises in a pandemic have been studied. The main aspects of popularization of family business are shown.*

Key words: *business, business, pandemic, crisis, plan, support, literacy, investment, capital investment, analysis, financial assets.*

Language: *Russian*

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ПРИВЛЕЧЕНИЕ НАСЕЛЕНИЯ К ПРЕДПРИНИМАТЕЛЬСТВУ И РАЗВИТИЮ СЕМЕЙНОГО БИЗНЕСА В РЕГИОНАХ В УСЛОВИЯХ ГЛОБАЛЬНОГО КРИЗИСА СВЯЗАННЫЕ С ПАНДЕМИИ COVID-19

Аннотация: *В статье рассматриваются понятия семейного бизнеса, предпринимательской деятельности и вопросы их анализа. Изучаются теоретические и практические аспекты дальнейшего развития семейного бизнеса, освещаются особенности их организации. Изучены практические аспекты поддержки этих предприятий в условиях пандемии. Показаны основные аспекты популяризации семейного бизнеса.*

Ключевые слова: *бизнес, бизнес, пандемия, кризис, план, поддержка, грамотность, инвестиции, капитальные вложения, анализ, финансовые активы.*

Введение

Развитие рынка труда занимает принципиально важное значение из-за его особой роли во всей рыночной системе, а также в связи со спецификой социально демографической ситуации в Узбекистане.

Новые тенденции в экономике, обусловленные ее модернизацией и диверсификацией, развитием сферы услуг, вызывают сдвиги на рынке труда. В республике ежегодно организуются множество новых рабочих мест, что создает благоприятные предпосылки и возможности для трудоустройства населения. Реализация принятых государственных целевых программ развития сферы услуг и сервиса, сельского хозяйства, надомного труда, малого бизнеса обеспечила постоянное увеличение числа новых рабочих мест.

Постановлением Президента Республики Узбекистан от 7 марта 2019 года № ПП-4231 «О дополнительных мерах по широкому привлечению населения к предпринимательству и развитию семейного предпринимательства в

регионах» в республике активно реализуются государственные программы, направленные на развитие малого бизнеса, семейного предпринимательства и само занятости населения, увеличение возможностей для женщин и поддержку молодого поколения [1].

Реализация программных мер по широкому привлечению населения к предпринимательской деятельности, созданию условий для формирования дополнительных и стабильных источников его дохода путем обеспечения занятости в ремесленничестве, надомном труде и других сферах предпринимательской деятельности способствовала улучшению в определенной степени экономического положения населения, особенно семей в отдаленных регионах, нуждающихся в социальной защите [2].

Пандемия коронавируса становится большим испытанием для всего мира. Возникший глобальный кризис оказывает серьезное влияние на экономику всех стран. По прогнозу Всемирного банка, в 2020 году ожидается спад мирового ВВП на 5,2 процента, США – на 6,1, России – на 6 процентов, Европейского союза – на 9,1 процента. Вместе с тем экономический рост предвидится на уровне 1 процента в Китае и 1,5 процента в Узбекистане. За последние три месяца отраслям экономики было предоставлено 2,3 триллиона сумов налоговых льгот, из Антикризисного фонда выделено 3,6 триллиона сумов.

На совещании глава государства отметил наличие всех возможностей для обеспечения дальнейшего роста экономики в текущем году за счет применения новых подходов и инструментов, и обозначил восемь ключевых направлений на этом пути[1]. В своем вступление из восьми ключевых направление в двух направлениях основной аспект уделяется сокращение бедности и рост занятости и развитие малого бизнеса.

Президент Республики Узбекистан Шавкат Мирзиёев провел совещание с участием хокимов Ферганской области и районов, руководителей сфер и отраслей, представителей общественности. Основное внимание было уделено вопросу по сокращению бедности, обеспечению занятости и увеличению доходов населения. На совещании отмечалось, что и в Фергане начаты масштабные мероприятия в этом направлении, поставлена цель к концу года вывести из бедности более 43 тысяч семей. В частности, около 14 тысяч семей смогут встать на ноги через малый бизнес, семейное предпринимательство и самозанятость. Дано указание увеличить объем кредитных ресурсов для финансирования таких проектов на 25 процентов, выделить 400 миллиардов сумов в виде кредитов по программам семейного бизнеса[2].

В решении задач по обеспечению устойчивого роста занятости, доходов и уровня жизни населения приоритетную роль играет широкое развитие различных форм надомного труда. В республике ежегодно растет количество новых рабочих мест надомного труда, созданных на основе трудовых договоров. В настоящее время в Узбекистане семейным бизнесом занимается каждая четвертая семья. По характеру деятельности семейный бизнес в основном представлен мелкой торговлей, сферой услуг и сервиса, а так же кустарным производством.

Во многих странах мира, в том числе в США и государствах Латинской Америки семейные компании являются основой экономики. Доля семейных компаний в этих странах составляет от 50 до 90 процентов. При этом семейный бизнес производит от 40 до 82% внутреннего национального продукта. Традиционно семейные компании на больший вес занимают в таких секторах, как производство продовольственных товаров, торговля, ресторанный и гостиничный бизнес, строительство, финансовые услуги и др [4].

В нашей стране правительство оказывает всестороннюю поддержку семейным предприятиям, созданы правовые основы для его дальнейшего развития. Толчком к развитию этой гибкой формы занятости послужило принятие Закона «О семейном предпринимательстве» и Указа Президента Республики Узбекистан № УП 3706 «О мерах по стимулированию расширения кооперации между крупными промышленными предприятиями и производством услуг на базе развития надомного труда»

Функции семейного хозяйства взаимосвязаны между собой и все они в известной степени подразумевают доходы и расходы, вместе с этим процесс не ограничен только сферой семейного хозяйства, он присущ всей системе экономических отношений. Это доказывает, что семейное хозяйство занимает важное место в экономике страны, они создают фундамент для обеспечения экономического прогресса.

Согласно статистическим сведениям на сегодняшний день в республике существуют более 7 млн семейных хозяйств, семьи имеют достаточное количество имущества чтобы использовать его для создания прибавочной стоимости. Этой сферой создаётся относительно большая доля валового внутреннего продукта.

Укрепление института семейного бизнеса в Узбекистане является важным аспектом как с

[1] http://uza.uz/ru/politics/opredeleny-klyuchevye-napravleniya-obespecheniya-stabilnosti-09-06-2020

[2] http://uza.uz/ru/politics/opredeleny-zadachi-po-sotsialno-ekonomicheskomu-razvitiyu-fe-06-06-2020

точки зрения развития бизнеса и частного предпринимательства, так и с позиции упрочения национальных традиций ремесленного производства.

Доказано, что семья представлена не только в качестве потребителя, но является основным участником экономических отношений в качестве предпринимателя. Поэтому все экономические функции семейного хозяйства должны рассматриваться в качестве факторов обеспечивающих его благополучие. Семейное предпринимательство, наряду с тем, что является владельцем средств производства и доходов. получаемых в результате трудовой деятельности членов семьи, также занимается производством товаров и оказанием услуг. Эта сторона его деятельности может проявиться, как один из видов малого бизнеса, осуществляемого оказание различных видов услуг. Развитие семейного предпринимательства создает возможности для повышения жизненного благосостояния населения всей страны.

При ведении семейного предпринимательства самым большим препятствием является отсутствие профессиональных навыков, финансового и управленческого образования, в связи с этим необходимо для семей, начинающих свой бизнес организовать краткосрочные курсы обучения, в сфере повышения компетентности по вопросам управления личными финансовыми средствами, раскрывать опыт передовых хозяйств. Это позволит предпринимателям грамотно организовать свой бизнес.

Известно, что общество достигает наибольших экономических успехов, когда его граждане обладают развитыми навыками принятия ответственных и сознательных решений в финансовой сфере. Финансовое образование и финансовая грамотность рассматриваются как важные факторы экономического роста экономики страны и повышения уровня доходов и благосостояния её населения. И наоборот, финансовая безграмотность может обернуться для страны тормозом развития финансового рынка, ростом банкротств среди частных лиц (особенно молодежи), низкой материальной обеспеченностью в пенсионном возрасте, блокированием социальных реформ, «не включенностью» широких слоев населения в круг потребителей финансовых услуг.

Организация обучения предпринимателей надомного и малого бизнеса призваны инициировать целенаправленное и широкомасштабное движение за финансовую грамотность населения. Повышение финансовой грамотности малоимущих слоев населения поможет в распространении передовых методов, стимулировании инновационных процессов..

Основная задача обучения – это расширение финансовых возможностей малоимущих семей в Узбекистане за счет стимулирования процесса развития организаций, инновации и создание соответствующей инфраструктуры на местном, региональном и национальном уровнях, приобретение навыков управленца.

Приобретение навыков управленца, а также финансовое образование позволит усвоить знания, навыки и отношения, необходимые для того, чтобы принять на вооружение качественные методы управления хозяйством, денежных операций в них, подготовить людей к рискам и чрезвычайным обстоятельствам, научить планировать активы семейного хозяйства и позволить эффективно пользоваться различными финансовыми и инновационными ресурсами.

Целью повышения финансовой грамотности являются умелая, профессиональная организация качественного труда, формирование доверия и уверенности в финансовом секторе, стимулирование передовых методов в планировании и сбережениях, знание потребителей кредитов, оценивать процентную ставку по кредитам и сравнивать продукты.

В повышении финансовой грамотности также нуждаются микропредприниматели малого частного и среднего бизнеса, для управления своими заработками для семьи и бизнеса. Люди среднего и ниже среднего достатка и их семьи для использования денежных поступлений не только для потребления, но и для накопления на будущее.

В Узбекистане очень много молодежи, ежегодно появляются тысячи молодых семей. Финансовое образование им необходимо для большей информированности при использовании финансовых услуг – потребительских и ипотечных.

Каждой семье необходимо управлять финансовыми потоками независимо от того, сколько она зарабатывает. И целью обучения являются распределение и планирование ежедневных расходов, сбережений на неотложные нужды и на долгосрочные цели (образование детей), займы на необходимые нужды.

На ряду с доступным обучением, необходимо подготовить и выпускать различные учебные пособия, вводить в образовательные учебные центры различные курсы для широких слоев населения, включать часы по финансовой грамотности в учебные планы средних школ и колледжей. В этом плане необходима широкая пропаганда финансового образования. В месте с этим, необходимо наладить охват образованием предпринимателей малого частного и среднего бизнеса при помощи средств массовой информации (СМИ).

Регулярное повышение управленческой, юридической и финансовой грамотности

населения через СМИ способно не только дать мощный толчок развитию финансовых инструментов и институтов, но и обеспечить поступательное движение во всех сферах социально-экономической жизни. В частности, это благотворно скажется на собираемости налогов, на развитии малого и среднего бизнеса.

Повышение управленческой, юридической и финансовой грамотности предпринимателей малого частного и среднего бизнеса (населения) обучением через СМИ, обязательно должно сопровождаться также повышением прозрачности работы финансовых институтов, доступности информации об их услугах, сравнимости условий по различным продуктам. Знакомство с правилами поведения различных компаний, предлагающих финансовые услуги на рынке, будет способствовать защиты населения от негативных последствий и мошенничества.

Сегодня в Республике, внимание уделяемое предпринимательству малого частного и среднего бизнеса свидетельствует о том, что от её развития становится зависимым устойчивость экономики государства.

Результаты проводимых исследований показывают, что во всех сферах субъекты малого и среднего предпринимательства сталкиваются с ниже приведёнными проблемами:

1. Низкая усваимость кадрами зарубежных языков, особенно русского и английского языков;
2. В связи с чем в недостаточной степени разрабатывают мероприятия при экспорте своих продукций за рубеж;
3. Недостаточность информации о большинстве продукций, выпускаемых малыми предприятиями, которые также выпускаются в каких странах и в каком количестве;
4. Не имеют достаточной квалификации и навыков при работе с нормативными документами и постановлениями правительства, связанных своей деятельностью;
5. Нехватка практики управления рабочими и процессом производства в большинстве малых промышленных предприятиях. Например, в некоторых предприятиях лёгкой промышленности, основные работники это молодёжь. Естественно при управлении ими, возникают определённые трудностями связанные с характером молодёжи. По этим вопросам нет достаточных навыков;
6. Из-за нехватки квалификации управления оборотными средствами, дебиторными и кредиторными задолженностями малых предприятий в большинстве случаях процесс производства простаивает;
7. Известно, малое и частное предпринимательство считается быстро приспосабливающейся к рыночным взаимоотношениям форма собственности. Однако, один из условий быстрого приспособления, зависит от своевременного изучения кадрами рынка, а также эффективной организации маркетинговых исследований. К сожалению практика показывает, что субъекты предпринимательства часто не могут проводить маркетинговые исследования.

Существование таких проблем, современном вызывает настоящий кризис. Так как, в период когда экономика ориентируется на малое и частное предпринимательство, ими воспроизводимые изделия должны быть конкурентоспособными не только на узбекском рынке, но и на мировом рынке. По этой причине самым важным вопросом сегодняшнего дня является повышение управленческой, юридической и финансовой грамотности предпринимателей малого частного и среднего бизнеса (населения).

Если на этому проблему смотреть глазами предпринимателя, то это кажется целиком и полностью затратным. Потому-что:

Во-первых, повышение квалификации или обучение на других курсах, хотя бы одного работника от предпринимателя требует сделать затраты;

Во-вторых, если для решения этих проблем предприниматель будет нанимать специалиста, или даже возникнет необходимость воспользоваться услугами аудиторской или адвокатской фирмы, ему также необходимо будет произвести финансовые затраты. Для малого бизнеса, затраты на обучение очень весомы;

В-третьих, у предпринимателя на повышение даже своей квалификации зачастую не бывает времени.

В таком случае возникает вопрос. Каким путём предприниматели могут формировать и обогащать свою квалификацию, а также научные знания?

В ответ на этот вопрос и с учётом выше изложенных соображений, считаем целесообразным применить на практике проект программы по порядку повышения квалификации, а также научных знаний предпринимателей посредством проведения занятий через телевидение (СМИ), а именно программа социального проекта «Повышение управленческой, юридической и финансовой грамотности предпринимателей малого частного и среднего бизнеса (населения)» через средства массовой информации (телевидение, радио, газеты и журналы).

Цель проекта - внедрить современные методы управления малого бизнеса и частного предпринимательства, а также повышение эффективности управления за счёт приобретения теоретических навыков по поводу всех вопросов управления у предпринимателей.

Исходя из этого проект выполняет нижеследующие задачи:

- Повышение эффективности управления малого и частного предпринимательства;
- Сокращать затраты на повышение квалификации сотрудников малых предприятий и сэкономленные от этого средства расходовать на развитие производства;
- Повышать в массовом порядке, теоретические знания субъектов предпринимательства;
- Заинтересовать всё население Республики предпринимательству;
- Внести вклад развитию предпринимательства в Республике;

В настоящее время государственная политика направлена на повышение значения и места малого и частного предприниматнльства в экономике, в связи с чем социальная степень проекта высока;

С практической стороны лёгкость внедрения проекта, повышает его практическое значение. В осуществлении проекта будут участвовать такие организации, как: Телевидение, областной хокимият, Ферганский политехнический институт, информационное агентство.

Для просмотра программы будут привлекаться в основном предприниматели и лица занимающиеся малым и семейным бизнесом. Кроме того могут принимать участие предприниматели Андижанской и Наманганской областей.

Проект в виде программы, состоит из курса повышения квалификации через телевидение. В нём возможный план занятий, предоставляемый учащимся в годичной программе, составляется на подобии сценария

Составленный план занятий объединяет в себе, приблизительно следующий комплекс предметов:

1. Правоведение. Оно включает в себя ознакомление со всеми нормативно-правовыми документами от начала создания предпринимательства до её ликвидвции.

2. Менежмент. Этим предметом через эфир предприниматели будуд получать информацию по управлению производством, работниками и финансами предприятия. Кроме этого, будут обучаться управлению против кризиса, а также другим современным формам управления.

3. Инвестиция. На этом занятии предприниматели будут получать знания и информацию об инвестиции, о его содержании и значимости, необходимости, а также предоставляемым со стороны государства для него льготам;

4. Налоги и налогообложение. Через этот предмет предприниматели получат ответы на вопросы, каким образом расчитываются налоги, в какой форме заполняются расчёты и когда кому предоставляются.

5. Маркетинг. Знания по настоящему направлению посвящены в основном рынку, рыночным отношениям, методам представления рынка, составлению договоров и реализацию продукции, повышению работы с рынком в деятельности предпринимателей;

6. Трудовая дисциплина. В данной теме предприниматели знакомятся с взаимоотношениями между руководителем и работником, методами расчёта зарплаты на малых предприятиях, а также основами права использования труда наёмных работников.

Настоящий проект через телевидение не только повышает квалификацию предпринимателей, но также помогает решить проблемы в процессе принятия ими решений.

В проекте кроме предпринимателей возможно участие широких слоёв населения, это подчёркивает, что проект будет служить повышению управленческой, юридической и финансовой грамотности предпринимателей малого частного и среднего бизнеса, а также значительной части населения.

Повышение финансовой грамотности населения не только даст мощный толчок развитию финансовых инструментов и институтов, но и обеспечит поступательное движение во всех сферах социально-экономической жизни. В частности, это благотворно скажется на собираемости налогов, на развитии малого и среднего бизнеса.

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HISTORY OF THE RAILWAY SYSTEM OF UZBEKISTAN: INTERNATIONAL RELATIONS AND THE BIRTH OF A NEW PROFESSION

Abstract: *The article analyzes the historical conditions of the railway system, formation of the industry and international relations. The article also discusses issues such as the construction of railways in Uzbekistan, the emergence of new professions and the integration of economic, spiritual, and cultural ties between the country and secular cultures.*

Key words: *railway, Central Asia, human resources, international relations, research, new values and knowledge, economic changes, labor communities, services, scientific literature, development of the railway system industry.*

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Introduction

The study of railway formation system in Uzbekistan is becoming one of the most important issues today. There is a growing need for qualified specialists in the railway system, which is a key sector of the country's economic growth. In particular, the launch of new railway routes in the country and the annual growth of number of employees in the industry (over 80 thousand) have further increased.

Qualitative reforms – in sectors such as tourism, transport communications, transport logistics within a framework of the Action Strategy for Further Development of the Republic of Uzbekistan for 2017-2021 – will further speed up demand for specialists, working in these industries. In this regard, for employees of the railway system, it becomes an urgent task not only to acquire, master and apply professional knowledge, but also to have an improvement strategy of effective activity, analysis and forecasting of socio-economic processes, management technologies and psychology.

Strengthening state independence is achieved through the establishment of new progressive relations in labor communities, production and services and educational and upbringing processes. Such approaches lead to various forms of protest in communities: reduced labor productivity and reduced profitability. The railway system is a key sector of the country's economic growth, and it requires highly qualified personnel with a high level of moral and ideological qualities.

It is known that the emergence of a new type of industrial development has become a necessity. Despite this, the first railway in the world was built in 1825 in the United Kingdom. This phenomenon also ensured connection of different regions and exchange of cultures.

Materials and Methods

The beginning of railways construction not only increased demand for crude iron, and steel, but also the demand for science, knowledge, and values. At the end of 18th century, the first crude iron tracks appeared, and by 1840s length of all railways in the world was 7,700 km [1]. The most of it came from the United Kingdom and the United States of America, which has led to the growth in economy and prestige of these nations in an international arena. By 1870,

total of 200,000 km of railways in the United States of America and Europe had brought closer interstate borders, which led to the popularity of different languages and exchange of knowledge. The first truck was built by Trevithick and was driven along the trail using a steam engine. Inventions and discoveries have shown that the theoretical knowledge exchange; in practice they are based on experience and gradual transfer of human labor into the hands of technology. The use applied science in social sciences has also helped to find solutions to problems in society. Humanity's demand for science and knowledge has grown even more.

G. Stephenson built his first steam locomotive – the Blucher – in 1814, and the first 21-kilometer public railway between Stockton and Darlington was built under his leadership, inaugurated on September 27, 1825. That became the reason of great news spread throughout the world. Later, the construction of railways began to be built in different countries, namely, in 1830 in the USA, in 1832 in France, in 1835 in Germany and Belgium, and in 1837 in Russia. The construction of subsequent railways was accompanied by periodic changes. There were thousands of examples in the scientific literature that there was a period of rapid development of railways between the 60s and 80s of 19th century.

Since the first half of 18th century, the ruling circles of Russian Empire have been consistently working to further expand trade relations with the Uzbek khanates. There is historical information about the dispatch of ambassadors to Bukhara and Khiva. The ambassadors were tasked with identifying natural wealth of the Uzbek khanates and collecting valuable information on scale of trade. However, the lack of convenient and accessible transport links between Turkestan and central regions of Russia impeded the implementation of the planned policy. The Russian press wrote with the concern: "Trade relations between Turkestan, Khiva and Bukhara and the central regions of Russia are carried out along the single caravan route Kazalinsk-Orenburg, partly in the direction of Troisk. The route is extremely difficult, and level of service is low and expensive" [2]. These problems created difficulties both for both merchants of the Russian Empire and the Uzbek khanates. The need for expanding transport links between metropolis and colony was to implement a policy of increasing trade between Russia and Central Asia – especially the growing appetite of Russian capitalist factories for cotton. While many merchants advocated the development of shipping to shorten distance for transporting Russian goods to Central Asian markets, whilst some suggested opening railways, which quickly penetrated European industries [3]. It was about shipping along the Aral Sea, Syr Darya and Amu Darya. They argued openly about this, viewing Central Asia as "their rightful property" and conducting research to calculate its wealth.

One of these studies was A. Stetkevich "Does Russia need Turkestan?" He proved that the country is "an excellent source of income" and recommended making it "harmless" and in the future "as soon as possible to lead the shortest railroad to the country" [4].

It should be noted that the issue of connecting Turkestan with the central regions of Russia by rail was raised in the mid-60s of 19th century. For the first time on January 12, 1854, Major General Maltsev submitted to the Special Court of Main Directorate of Ministry of Communications of Russia an official proposal to build a railway along the Kharkiv-Perekip route, extending it through Kzlyar to the Aral Sea. However, the proposal was rejected by the Special Court on May 13, 1855 due to the lack of careful study and theoretical justification [5]. Unfortunately, Russia's policy of building railways in Central Asia remained open for a long time.

On July 19, 1856, the commander-in-chief of Russian army in Caucasus, Prince A. Baryatinsky, presented to the Russian emperor Alexander II a project: the construction of a railway along the Ustyurt territories, through which the Caspian and Aral seas are connected. This project clearly formulates the need of expanding Russia's influence to the East. The proposed railway would replace the "complex and detour caravan route" with convenient and affordable transport links, as well as "unite trade with neighboring countries, create great opportunities for the sale of Russian goods to distant countries" he wrote in his presentation. He added that the importance of this road is not limited to trade, "politically it lays the foundation for our spiritual superiority in the Far East, and it allows us to mobilize our military forces in short period of time from the Caspian Sea to the Aral Sea. Thus, Russia would be able to use the positional advantage given it by nature and freely increase its influence on territories inaccessible to other European countries" [6]. The issue of connecting central regions of Russia with Central Asia by rail has been discussed for more than 25 years, and from 1854 to 1880 over 40 projects were submitted to the government of Russia [7]. Some sources cite several factors that delayed the construction of railway to Central Asia. Most of these projects are tied with the connection of central regions of Russia with Central Asia through the construction of railway along the Orenburg-Karatogay-Tashkent, Uralsk-Aral Sea-Tashkent, partially Petropavlovsk-Akmola-Turkestan-Shymkent-Tashkent, Omsk-Karakara-Avliyoota-Tashkent and connect Central Asia with the Siberian highway [8]. These were projects proposed by local and foreign engineers to connect the Russian and Anglo-Indian railways along the Orenburg-Tashkent-Peshawar route.

According to the first project proposed by Ferdinand de Lesseps in the late 1960s, and it was supposed to connect Russian and Anglo-Indian

railways along the Orenburg-Tashkent-Peshawar route. In the letter, drawn up by Ferdinand de, it says: "This path ... would open up new markets for Russia, which will make it a source of inexhaustible wealth" [9].

The history of railway construction in Turkestan began in 1874, when the Special Commission analyzed all the projects and found reasonable the construction of Orenburg-Tashkent railway. The history of railway construction in Central Asia began in 1880. Construction of Caspian Railway began in November 1880. In 1885, the railroad reached Ashgabat and in 1886 Chardzhou. In May 1888, with the construction of 30 bridges across the Amu Darya, a railway was opened to Samarkand. In 1885, starting point of the Caspian Railway was moved from Mikhailovsky Bay to Uzun-Ada, and in 1896 to Krasnovodsk (now Turkmenbashi).

Railway construction in Central Asia is aimed at solving the biggest problem. This was to serve to strengthen the military superiority and political domination of Russian Empire in these lands.

The first 217 km railway in Central Asia was completed in 10 months. On September 20, 1881, trains began to run along steel tracks from Mikhailovsky Bay to Kyzyl-Arvat. Later, the railway was extended from Kyzyl-Arvat to Samarkand, and the second Caspian railway battalion was formed. In May 1895, under the leadership of engineer A. Urusatiev, construction of railway from Samarkand to Tashkent and Andijan began, the length of which increased to 2,368 km. 1,748 km of road passed with the Krasnovodsk-Tashkent route, 294 km – to Murghab, 306 km – to the Andijan network, 12 km – to Kogon-Bukhara and 8 km – to the Gorchakovo (Margilan)-Skobelev (Fergana) stations. The railway industry built 99 stations, 96 bridges, many residential buildings, workshops, and educational institutions [10]. The capacity of trains on rails reached 17 pairs per day in 1903.

In fall of 1900, construction of the Orenburg-Tashkent railway began in Russia. Construction began in two directions – Orenburg and Tashkent, and in 1906 the Orenburg-Tashkent railway with a total length of 1,736 km was exploited. In the same years, 354 km Kinel-Orenburg network was built. There is an open information, which says the entire railway network in 1906 totaled 2,090 km. The Tashkent-Orenburg route is the second largest railway network connecting Central Asia with central industrial regions of Russia. Later, construction of internal routes began, such as the Fergana railway, Kogon-Termez, Karshi-Kitab.

In 1899, the Caspian Railway was transferred to the Ministry of Communications after joining the Samarkand-Andijan route and was named Central Asia, passing through the territory of the Syr Darya, Samarkand, Fergana, Caspian, and Bukhara khanates. The total length of the railway was 2,354 km.

At the initial stages of the exploitation process, its primary role was to use it for political and military purposes, but afterwards it was used for commercial purposes as well. From 1887 to 1900, freight turnover increased 7.3 times. Exports from Central Asia, such as cotton, dried fruits, silk, and karakul, have sharply increased. In return, they began to import more fabrics, sugar, metals, and other manufactured goods from Russia. Under these opportunities of export to Russian market, there was an increase in production of Central Asian countries, and certain industries began to develop. The appearance of railway had a positive effect on the development of Russia's trade with Afghanistan and Persia. If in 1896-1900 the Russian Afghan trade turnover amounted to 2.7 million rubles, then in 1906-1910 it reached to 5.08 million rubles and in 1911 to 10.6 million rubles [11].

In Soviet times, the Central Asian railways united the railways of the Uzbek SSR, the Turkmen SSR, the Tajik SSR, and partly the Kyrgyz SSR. The location of railway department was in Tashkent.

Reconstruction of Central Asian railways was carried out in 1920s. In 1931 regular passenger and freight transportation by locomotive began on the Ashgabat-Dushak and Ashgabat-Bami routes. In 1974, the railway became the first in the USSR railway network to be completely converted to locomotive traction.

During World War II, the railway connected Central Asia with Caucasus and center of the USSR. After the war, construction of new railway routes in territories of present-day Uzbekistan Kungrad-Beineu (408 km) was considered as an important route, which was launched in 1972. In 1982, the opening of a road-rail bridge across the Amu Darya in the Termez region, which in turn contributed to the strengthening of transport and economic ties with Afghanistan.

In 1980s, the railway system was in recession. As a result of the long inactivity of railway industry, many problems accumulated. In passenger traffic, intercity and inter-country trains often deviated from the schedule. The wagon trade, wagon mishandling and betrayal of state and customer property was rampant. The carriage corps were rusted out because of hot summer and cold winter, the carriage windows were smashed, and they were barred with iron bars resembling a prison. This situation has become a serious problem of great damage to economy and social life of the republic.

The main reason for this situation was an inability to pay attention to the railway industry for many years, an inability to carry out the necessary reforms – due to inefficient of locomotives and wagons repair base.

August 31, 1991 gave the people of Uzbekistan unforgettable moments. It will remain in our memory as a date of the proclamation of independence – the country determines its own fate.

Independence was not easy to achieve. Our achievements, in all sectors over the years of independence, are related to reforms of the first President of the Republic of Uzbekistan Islam Karimov. On the eve of independence, the country was in a difficult situation in all directions. In particular, the railway system was going through a period of severe recession. Many problems have accumulated because of prolonged neglect of the railway industry. To create favorable conditions for the development and strengthening of international transport and economic relations, Uzbekistan in the first years of independence took several organizational, legal, and practical measures.

Conclusion

On the eve of independence in railway system, as in other sectors, several problems arose, and situation became much more tense. If these problems were not immediately resolved, and appropriate measures were not taken, the situation would have been worsened and become more complicated. On February 25, 1991, the first President of the Republic of Uzbekistan Islam Karimov gathered representatives of the industry. The situation was analyzed, and necessary actions were determined to make a major turnaround for the future.

While measures were being taken to remedy the situation, the former Soviet Union collapsed, and our country gained independence. Disagreements began between the newly independent states, and more complex problems arose in the railway system due to the lack of a legal basis for cooperation.

The situation was exacerbated by the neglect of training local leaders at the time and the departure of a large part of the local engineering staff. In addition, the repair base was located mainly in Russian regions. Spare parts were produced entirely outside of Uzbekistan and were imported through a "barter" method, which was contrary to our interests.

The main problem was the passage of transport communications through territory of neighboring republic. Due to unjustified delays of freight trains both in the southern and northern directions, the chiefs of railways went to border points and waited for a pass for months. To overcome these problems, the first President of the Republic of Uzbekistan Islam Karimov put forward a policy to create a training system: modernizing industrial production, existing equipment and technologies, building alternative routes and creating a unified national railway system.

After all, the development of economy of the landlocked country largely depended on the development of railways. It should be noted that the railway system of Uzbekistan paved the way for great progress. Over the past quarter century, based on a well-thought-out, long-term strategy has been done to comprehensively develop the industry. Today, within the framework of the Strategy of Actions for the Further Development of the Republic of Uzbekistan for 2017-2021, reforms are being carried out in the railway system, as well as in other industries.

President Shavkat Mirziyoyev said: "First of all, our people should feel the impact of reforms today. To this end, entering a new phase of development, we conducted a critical analysis of our mistakes and shortcomings, as well as objective assessments of our potential capabilities. If we do not do it by ourselves, no one from outside will tell us these mistakes. We are building our own future. We have no right to make mistakes".

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FROM THE HISTORY OF THE UZBEK (TURKESTAN) DIASPORA IN GERMANY (EARLY XX-XXI CENTURIES)

Abstract: *This article analyzes the formation of the diaspora of Uzbeks (Turkestans) living in Germany, the reasons for their migration, the characteristics of the location, the factors influenced by the Uzbeks (Turkestans) and their historical significance.*

Key words: *Strategy of Actions, interethnic relations, Germany, Turkestan, diaspora.*

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Introduction

Adoption of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 will lead to a well-thought-out, mutually beneficial and practical policy aimed at creating an environment of stability and good neighborliness, as well as human values in the minds of the population, especially youth. Strengthening requires a qualitatively new level of work in this area. The establishment of the Committee on Interethnic Relations and Friendship with Foreign Countries under the Cabinet of Ministers of the Republic of Uzbekistan is important in ensuring the implementation of the fifth direction of the Action Strategy of the Decree of the President of the Republic of Uzbekistan "On measures to further improve interethnic relations and friendly relations with foreign countries". In particular, support for compatriots and close cooperation with the Uzbek diaspora abroad, raising the prestige and image of Uzbekistan in the world arena are identified as one of the main directions of state policy of the Republic of Uzbekistan in the field of interethnic relations.

The history of the Uzbek (Turkestan) diaspora living in the Federal Republic of Germany, one of Uzbekistan's strategic partners, is one of the least studied topics. Consistent implementation of state policy aimed at ensuring interethnic harmony and tolerance in society, effective coordination of work on educating young people in the spirit of respect for national and universal values and strengthening friendship with our compatriots living abroad are important tasks.

From the beginning of the twentieth century, Uzbeks began to leave their traditional places of residence en masse. This process was largely criticized in the former Soviet Union. As a result of the independence of the Republic of Uzbekistan, attitudes towards Uzbek migrants have changed dramatically. As a result, there was an opportunity to study the problems of Uzbek (Turkestan) emigration. Over the past period, a number of articles, PhDs and doctoral dissertations have raised the issue of Uzbek immigration to one degree or another. Researches of P.P. Vorobiev, Sh.K.Karimov, R.T. Shamsutdinov, K.K.Rajabov, Sh.A.Khayitov and I.Shamuradov on the issue of Uzbeks (Turkestans) in Germany have been published[1-6].

They mainly deal with the fate of Turkestan prisoners of war in Germany during World War II, the formation and activities of the Turkestan Legion. It should be noted that they also contain valuable information on the history of the Uzbek (Turkestan) diaspora.

One of the main stages in the formation of the Uzbek (Turkestan) diaspora in Germany dates back to the first quarter of the twentieth century. In the context of political and social changes in Turkestan, Jadid

intellectuals sought to save the country from centuries of backwardness and put an end to economic and cultural decline. Turor Risqulov, Fayzulla Khodjaev, Munavvar qori Abdurashidkhonov, Ubaydullo Khodjaev, Fitrat and others were active in this regard. All available opportunities have been used in this direction, and special attention has been paid to the training of national personnel. The developers of Turkestan, first of all, considered it necessary to study the achievements and experiences of Germany, the most developed country in Western Europe. To do this, it was first necessary to send local youth to Germany, as well as to other advanced countries in the East and West, to get acquainted with the scientific and technological achievements and experiences achieved in these countries.

Attempts have been made to send students from Turkestan abroad in various ways. First, at a meeting of the Uzbek Scientific Commission held in Tashkent on April 23, 1921, the issue of sending Uzbek students abroad was discussed. At a meeting of the Uzbek scientific commission, it is proposed to raise the issue of sending at least 10 of the most talented young people in Turkestan to study abroad.

The movement to send students abroad was later intensified by the leaders of the Bukhara People's Soviet Republic Fayzulla Khodjaev and the Minister of Education Fitrat. They even provide assistance to the Turkestan Autonomous Soviet Republic in this regard.

Thus, at the end of 1922, more than 70 local young men and women of different ages from Turkestan and Bukhara entered higher and secondary special educational institutions in various German cities in agriculture, textile industry, chemistry, electrical engineering, mining, philosophy, pedagogy, medicine and other important fields. sent to study.

Fitrat had encouraged students to study well in Germany, to return to their home countries in the future as good professionals, and to serve as selfless patriots for its future.

Of those who went to Germany, 16 were from Turkestan, 56 from Bukhara and 2 from Khorezm. The Bukhara government sent $ 125,000 and karakul skins for this purpose, which made the students live until 1924. It will also buy a house on W. Geisbergstreet in Berlin, 39, which will be converted into a Turkestan dormitory[7].

In general, by the end of 1922, about 200 Turkestan students were sent to educational institutions in various fields. 74 of them were sent to study in Germany. In an article published in the Turkiston newspaper, Shakir Suleiman said that 70 students from all over Turkestan in Germany, the only European country, considered it very rare for them to study[8].

During this period, a number of students were sent to Germany by the "Support" organization established in Tashkent. In addition, a group of students voluntarily went to school with the support of their parents.

Many of our students who went to study in Germany in the early 1920s lived there to live up to the hopes and beliefs of their homeland, interacting with German youth and students from around the world, and learning more about German language, tradition, history, culture, science and technology. they also tried to evoke among them an idea of their national culture and art. They held “Oriental Nights” among the Germans, promoting and disturbing our national songs and dances.

From the second half of the 1920s, the campaign of political persecution and suspicion against Uzbek students studying in Germany in the USSR intensified. Students begin to return to the USSR under various pretexts before completing their studies. To this end, control over their activities is strengthened and takes the form of pressure. This led to a justified protest from the students, and some of them realized that returning to the USSR could be dangerous for them[9].

Akmadjon Ibrokimov, Afzal Abdusaid, Togir Chigatay, Ibrahim Yorkin, Abduvaqob Iskak, Saida Sherakmad qizi and a group of our students, who heard similar cold news in the early 1930s, did not return to the USSR from abroad and stayed in Germany[10].

During World War II, Turkestan was forced to meet the demands of the Soviet Union's military economy on the one hand, while on the other hand it played an important role in the military potential of the Soviet Army. This was one of the important foundations of the Soviet Union's victory in the war. World War II, meanwhile, raised the national question of Turkestan.

The second important period in the formation of the Uzbek (Turkestan) diaspora in Germany was the years of World War II. There is no exact data on the number of Turkestan Turks mobilized in the Red Army during World War II. According to some data, in 1943 there were 1,179,802 Turkestan soldiers in 6 military units of the Red Army, namely, Minsk, Kiev, Moscow, Leningrad, the Far East, the North Caucasus. According to German military sources, in the early years of the war between the Soviet Union and Germany (1941-42), the Soviets had about 2 million Turkestan soldiers on the Western Front. According to the German Prisoners of War Department in 1943, about 1,700,000 Turkestan Germans were taken prisoner by the Soviet Army in the early years of the war (1941-42). In the early years of the war, most of the Turkestan Soviet soldiers who clashed with the Nazi army were helplessly armed, and therefore suffered heavy blows. As a result, a large number of Turkestans perished. Only a small number of Turkestans serving in the Soviet Army withdrew. But most of these were also captured and killed by the German army. Some were taken to Germany for

forced labor. During this period, German influential people began to focus on the propagation of ideas that strengthened the national mood among the Soviet nations. Turkestan intellectuals who were in Germany in the early years of the German-Soviet War moved to Turkey in 1939 after Poland was annexed by Germany and the Soviet Union. In those years, two Turkestan intellectuals, Mustafa Chokay, who lived in Paris, and Vali Qayumkhan, who lived in Berlin, and immigrant intellectuals of the Turkic peoples living under Soviet rule, were preparing questionnaires for prisoners of war from their countries. In December 1941, Mustafa Chokay died. In the Soviet Union, the immigrant leaders of the Turkic tribes in Germany began to compile questionnaires to recruit prisoners. In early 1942, the situation changed. The question of admitting some of the nationalities standing in Germany to the legions was considered. Thus, Armenian, Georgian, North Caucasus, Azerbaijani, Itil-Ural and Turkestan legions were formed in the territories under German rule. In August 1942, the "Committee of National Unity of Turkestan" was formed under the chairmanship of Vali Qayumkhan, and at the same time the magazine "Milliy Turkiston" was published; The first issue of the magazine (15.8.1942) came out under the title “Our Way” and stated, “Our way is the way of the fathers, the way of independence”. At the end of 1944, the number of soldiers and officers in the Turkestan Legion was 181,402. These included workers in uniform and members of the Legion, with more than 85,000 members. At the end of 1944, more than 267,000 Turkestans served in the Turkestan Legion[11].

Since the formation of the Turkestan Legion (September-December 1941), the National Turkestan Unity Committee (TMBK) has been established to manage this military association in ideological and other areas. In the spring of 1942, the Turkestan Legion became directly involved in military operations, and soon the TMBK was formed. Vali Kayumkhan (1904 - 1993), one of 74 pupils and students sent from Turkestan to Germany to study in the 1920s, took over the administration[12].

The Darby branch of the TMBK has solved the problems of legionnaires' salaries and vacations. He was engaged in such tasks as awakening the national spirit in the legionnaires, among them the distribution of newspapers and magazines in national languages, organizing cultural and educational events aimed at meaningful leisure, health care. The National Union of Writers of Turkestan was established under his auspices, and its activities included the publication of works by writers from the Turkestan region and their distribution among legionnaires.

TMBK ceased operations after World War II and resumed in 1947. The members of this organization mainly gathered in Munich, Germany and continued their activities. The organization's press office was based in Düsseldorf, the headquarters of the National Turkistan magazine. TMBK has branches in countries such as Saudi Arabia and Turkey, which collect fees from migrant Turkestans and send funds to its address for regular publication. From 1948 to 1950, members of the TMBK also moved their headquarters to Minden, Westphalia, West Germany. TMBK members were criticized in Soviet-era research, articles, sources, and documents based on communist ideology as "patriots," "war criminals," "slanderers of fascism," "spies and spies," "US spies," and "British spies"[13].

After the Second World War, the TMBK conducted research on the history, economy, political, cultural, educational and national problems of Turkestan (Uzbekistan). Migrant Turkestan youth received material and moral support to study at universities in European countries. Great propaganda work has been carried out among Uzbeks (Turkestans) abroad to strengthen their sense of national identity, confidence in independence and love for the Motherland[14].

During the years of independence, the activities of national cultural centers, which are an example of attention to various diasporas, are playing an important role not only in domestic but also in foreign relations of the country. Because the stable activity of the national cultural center, which is a social association of representatives of a particular country and the corresponding diaspora, has a positive impact on diplomatic relations with various countries around the world. In particular, the issue of the German diaspora living in the country plays an important role in the development of relations between Germany and Uzbekistan. The fate of this diaspora and the conditions created for them are of direct interest to the German government as well. In this regard, a number of meetings were held between the two countries on the conditions created for the German diaspora living in the country[15].

The Council of Societies of Friendship and Cultural-Enlightenment Relations of Uzbekistan with Foreign Countries has begun to establish cultural ties with compatriots abroad. They also run a cultural society of Turkestan compatriots in Germany. In Munich, this society united not only Uzbeks, but also Tajiks, Turkmens and Kyrgyz. The chairman of the society since 2000 was Hussein Ikram, a former journalist and writer for the Voice of America. The Bukhara University Citizens' Center also operates under the auspices of the society. In September-October 1998, he visited Uzbekistan with the Deputy Chairman of the Society Husan Ikrom oglu. After the death of Hussein Ikram, the society has been headed by his son Ilham Ikromi since 2005[16].

These relations continue after the establishment of the Committee on International Relations and Friendship with Foreign Countries under the Cabinet of Ministers of the Republic of Uzbekistan.

In general, the study of the history of the Uzbek (Turkestan) diaspora in Germany requires an ideological approach to the conflicting events of the past. At the same time, it allows us to assess the impact of various political changes in the twentieth century on the life and development of the Uzbek people.

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GENERAL CHARACTERISTIC OF THE INTELLECTUAL TRANSPORT COMPONENT OF SMART CITY MANAGEMENT ON THE EXAMPLE OF THE EXPERIENCE OF UZBEKISTAN

Abstract: *The article discusses the latest achievements of modern governance and the importance of the smart transportation component in smart city governance. The author analyzes the effective reforms carried out in Uzbekistan in recent years and their practical significance. and finally a number of conclusions.*

Key words: *Smart management, smart city, smart transport, surveillance cameras, Atto, navigation system, geolocation, smart payment system, road traffic accident.*

Language: *English*

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Introduction

Today's innovative development has already covered all spheres of society. In this regard, the management sector also should be noted. As you know, today "Strategy of Action" became basis of all important reforms. At the same time, based on foreign experience resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. RCM-48 has adopted on January 18, 2019 about "The Concept of the implementation of smart urban technologies" and the Plans for 2019-2021 years "Practical measures for the implementation of the Concept of implementation of smart urban technologies"[1].

If we look at foreign literature and magazines, we could see how importance of "smart cities" and their relevance for today's development.

For instance, article of M. Batty, K.W. Axhausen, F. Giannotti, A. Pozdnoukhov, A. Bazzani, M. Wachowicz, G. Ouzounis, and Y. Portugal, which published on December 5, 2012 in The European Physical Journal special topics (Smart Cities of the Future) they have mentioned about emergence of smart cities - "There are powerful networks in the world today, including: all transportation systems, utilities, smart metering, local weather, pollution levels and waste, destruction, land planning, energy saving and use of construction technologies, the list of health information systems is endless. The point is, we urgently need a map of the region so that we can combine these different activities[2].

In short, the main need for the emergence of a smart city is to create a systematic and useful solution aganist growing and expanding systemic problems. It consists of striving from chaos to synergy.

According to the study by University of North Texas scientists Saraju P. Mohanty, Uma Chopalli and Elias Kougianos, global population growth in recent years and by 2050 more than 70% of the population could live in cities. It means that 80% of greenhouse gases would be concentrate in cities. This assumption, which is becoming increasingly realistic, is being taken as a factor by scientists, who point out that "smart cities" as a unique strategy for overcoming the problems that may arise in the process of rapid urbanization. In this regard, a number of requirements have been developed by the International Organization for Standardization (ISO), which believes that these standards play an important role in ensuring the safety and quality life conditions of a smart city[3].

The world experience has considered different and comprehensive views on the studying issue. Another proof is ATIS. ATIS is a complex of large companies in the field of information and

communication technologies (ICT) to address common, important priorities, headquartered in the United States. The main tasks of ATIS are to reach agreements on problem solving and development of new business opportunities, to have a long-term, strategic vision for the development of the process of industrial transformation or to create a platform for cooperation with other states' industries and stimulate to innovation[4].

Smart Cities Technology Roadmap by ATIS has published in the U.S. in 2017, and mentioned completely about details components of the Smart cities[5].

The first component is Smart Transport. Although the term did not appear for a long time, today the term is widely used not only scientifically but also socially. At the same time, this factor is an important factor in the system of "smart management". The development of the engineering industry, the growth of the population and the establishment of a perfect, reliable and, most importantly, fast and cost-effective transport system are urgent issues. In the example of Tashkent, which is the capital city, and the central cities of the regions, the above task is an important issue on the agenda. The concept envisages the introduction of the following measures through the introduction of technological solutions in the field of "smart transport":

First, automation of the traffic control system and monitoring of traffic flow indicators, including real-time monitoring of traffic conditions;

This will optimize traffic and ensure comfortable movement in the face of increasing private and public transport. This, in turn, will help to avoid possible congestion on the roads, problems with technical deficiencies, as well as the timely resolution of alternative solutions. The correct and timely movement of public transport will ensure that citizens can reach their destination quickly and efficiently.

Second, public transportation management software;

In this regard, to provide traffic participants with information about road conditions and situations, public transport schedules through an automated system. At the same time create applications that allow you to monitor the movement of public transport. This allows passengers to get an idea of public transport, taking immediate action in the event of a traffic accident. A number of practical steps have been taken in this regard. For example, in June 2017, two types of cameras were installed in Tashkent and later at the intersections of regional centers. One of them works in video surveillance mode and is installed to monitor the streets and intersections, while the other detects violations on the roads, sends information about the offending driver to the database and imposes administrative sanctions on him. serves to apply. According to the program, by 2021, all intersections and central streets of Tashkent will be 100% camera-controlled.

1 Surveillance camera 2 Camera that detects traffic violations

Picture 1.

At the same time, the above-mentioned types of cameras and "smart traffic lights" are being installed at the main intersections of the central cities of the regions.

Picture 2. Smart traffic light system in Tashkent.

Third, the full implementation of security systems in public transport;

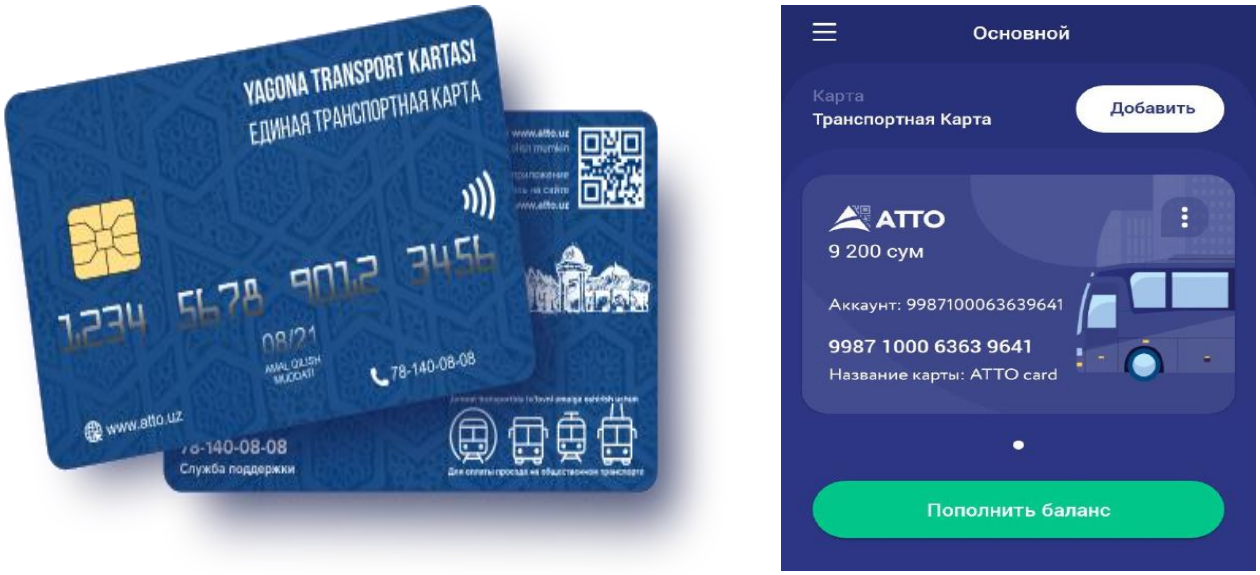
Of course, the necessary measures have already been taken. That is, this system is not unfamiliar to Tashkent. Each car of the Tashkent metro operating in Tashkent is equipped with cameras that allow you to observe a 360-degree angle. At the same time, surveillance cameras which has human face identifier function and activity of operators have installed at each metro station. Today, large-capacity Mercades and Samarkand-made MAN buses are equipped with security cameras, which is an important factor in ensuring the safety of citizens traveling on public transport.

Fourth, the introduction of information technology, 5G-compliant communication devices and actuators, a comprehensive Internet network and other elements that provide data transmission and storage;

Of course, the exchange of information in a high-quality form necessitates the use of the latest network system. Currently, measures are being taken to bring the 5G system already used by China, Japan and some European countries to Tashkent and regional capitals. The Ministry of Information and Communication, mobile and Internet companies have developed a roadmap of necessary measures under the Strategy of Actions and are gradually implementing it.

Fifth, the introduction of urban Internet platforms for the Smart City;

The first issue to be addressed in this regard is the development of "smart placement" technology, which determines the space for the placement of vehicles and their distance. It is also planned to introduce electronic payment systems for the use of vehicles during the day, thereby continuously monitoring the status of passenger traffic. At present, all lines of the Tashkent metro and passenger buses have an electronic plastic card "Single Transport Card" (General transport card), which allows passengers to pay with a single movement. To do this, you need to install the mobile application ATTO.uz on your mobile phone and attach a single transport card to it. The application allows each user to make instant payments and monitor card transactions[6].

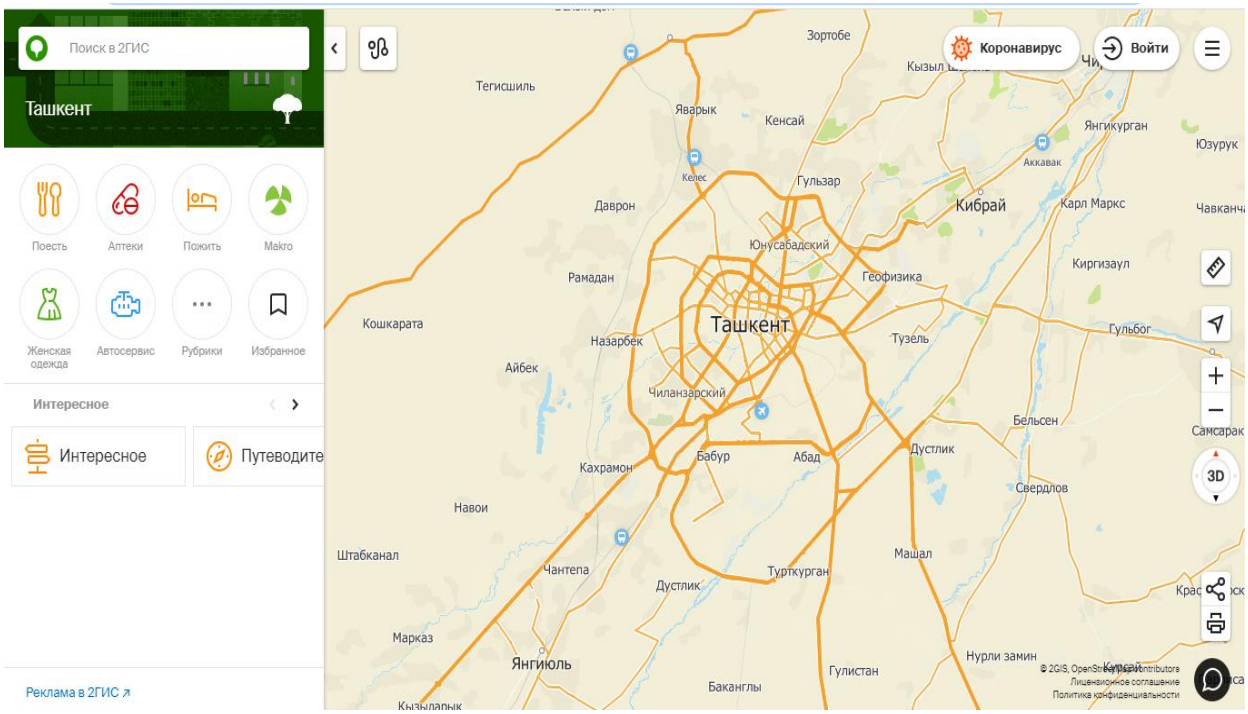


"ATTO" card "ATTO" mobile application

Picture 3.

Fifth, Geoinformation Technologies and Navigation;

Of course, the presence of this system will serve to effectively meet the needs of foreign guests, tourists, or staff coming on a business trip to the city in the future. Of course this requires the creation of a number of perfect applications. For example, Google has features such as Google map and Google Earth, while Yandex has developed its own Yandex search engine. Several national systems have been produced that perform similar functions. Examples include Tashkent Map[7], 2GIS, [8] and Tashbus [9].



Picture 4. 2GIS mobile application.

The essence of the problem is how the components mentioned and explained above will work in the future. With the full implementation of the smart transport system, the following positive results

can be achieved.In particular, statistics show that an average of 9-10 thousand traffic accidents occur in the country every year[10].

More than 2,000 of them end up killing civilians. This is stated in the concept of road safety in the Republic of Uzbekistan in 2018-2022[11].

The transition to a smart transport system will reduce the number of accidents per year. At the same time, with the help of SOS signals or surveillance cameras, which are currently being tested in cities and roads, the Ministry of Internal Affairs, the Ministry of Emergency Situations and the Ministry of Health will be able to integrate into the affected areas. mined. This will increase the chances of saving the lives of citizens who die due to untimely first aid. It is also possible to ensure the free movement of citizens in vehicles through secure, geolocation, smart transport payment systems, the ability to pay quickly and easily through electronic payment systems, the ability to travel from abroad or across the country without problems. 'is guaranteed. At a time when urbanization is evolving and the number of pressing problems in transport and logistics is growing, the Smart Transport System is the most effective innovative solution.

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THE ROLE OF RELIGIOUS RECONCILIATION IN MAINTAINING PEACE AND TOLERANCE IN UZBEKISTAN

Abstract: *The article discusses the policy of the state in the field of religious tolerance and interethnic harmony during the years of independence and the essence of its content. According to the author's analysis achievements which have gained in this sphere also summarized. Instead of the last word, the author presented his conclusions.*

Key words: *UN, Action Strategy, tolerance, Cabinet of ministries, Religious organizations, international forum.*

Language: *English*

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Introduction

The development of any society is first and foremost ensured by peace and tranquility. Ensuring peace and tranquility around the world, uniting multinational peoples under a single idea with respect for the principle of diversity of opinion, and introducing the ideas of religious tolerance to society while ensuring freedom of conscience are becoming very important and difficult today. The fact that sometimes even in the most economically developed countries there are disagreements on national and religious grounds, such countries are starting the process of promoting the idea of tolerance in their education system. In his speech at the 72nd session of the UN General Assembly on September 19, 2017, the President of the Republic of Uzbekistan Sh.M.Mirziyoev proposed to adopt a resolution "Enlightenment and religious tolerance" on the implementation of the ideas of religious tolerance in the education system[1].

More than 40 Muslims were killed in an armed attack on two mosques in New Zealand on March 15, 2019[2].

On April 21, 2019, 185 people were killed in explosions at three luxury hotels and several Catholic churches in central Colombo, Sri Lanka[3].

Moreover, the long-standing religious divide in Ethiopia has shown that implementing such a resolution is a crucial task. Uzbekistan is a multinational state. Today, about 140 nationalities make up more than 33 million citizens of Uzbekistan. Almost all of them are people of religious beliefs, and about 2,250 religious organizations belonging to 16 religious denominations in the country serve their religious needs[4].

The main principle of the policy pursued by the Government of the Republic in this area is based on the principle of "secularism is not atheism." The state's attitude to religion was based on the clear belief that "man cannot live without faith"[5].

The fifth direction of the state program "Strategy of Action", consisting of 5 initiatives, put forward by the President of the Republic of Uzbekistan Sh.M.Mirziyoev on February 7, 2017, is aimed at ensuring security, interethnic harmony and religious tolerance and 25 practical decisions were made[6].

For example, the Decree of the President of the Republic of Uzbekistan dated April 16, 2018 "On measures to radically improve the activities of the religious and educational sphere" has become of great importance in this area[7].

Also, in order to create additional conditions for citizens of the Republic of Uzbekistan to study in foreign religious educational institutions, the Cabinet of Ministers of the Republic of Uzbekistan adopted a resolution "On measures to create additional conditions for studying in foreign religious educational institutions" on August 13, 2018[8].

It was noted that the Committee on Religious Affairs of the Cabinet of Ministers of the Republic of Uzbekistan will consider the requirements of the applicants not only for foreign education, but also for employment. On the basis of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 31, 2018 "On the procedure for state registration, re-registration and liquidation of religious organizations" reduced the fee for the establishment of religious institutions and reduced the documents required for the declaration. The Ministry of Justice abolished the procedure for imposing a fine of up to 100 times the minimum wage if religious institutions violate the law, and dismissed the Ministry of Justice[9].

The fine was reduced by 15 times. The number of documents submitted for the establishment of religious institutions has been reduced and the amount of fees has been reduced. All this, of course, is done to support the activities of religious institutions. The task of regulating religious relations since independence of the Republic of Uzbekistan was assigned to the Religious Committee established on the basis of the Decree of the President of the Republic of Uzbekistan dated March 7, 1992 "On the establishment of the Committee on Religious Affairs under the Cabinet of Ministers"[10].

Article 4 of the Constitution of the Republic of Uzbekistan states that "the Republic of Uzbekistan shall ensure respect for the languages, customs and traditions of all nations and peoples living on its territory, and create conditions for their development"[11].

This principle is fully consistent with one of the main tasks of the Religious Committee - to ensure the interaction and cooperation of state bodies with religious organizations located in the territory of the republic, and Article 61 of the Constitution of the Republic of Uzbekistan states: The state does not interfere in the activities of religious associations"[12].

The main law regulating the religious sphere in Uzbekistan is the Law on Freedom of Conscience and Religious Organizations, adopted on May 1, 1998. The law consists of 23 articles, on the basis of which the activities of religious institutions are fully regulated. Religious tolerance requires that a person treat all religions with respect, be intolerant of religious and national conflicts, and be tolerant of different religious beliefs. Apparently, tolerance is a broad and positive concept, and today about 70 international documents on tolerance have been adopted, and most of them also interpret religious tolerance. A lot of work is being done in our country to implement the field of religious tolerance. In particular, the "Regulations on the activities of the adviser of the citizens' assembly on religious enlightenment and spiritual and moral education", developed by the Cabinet of Ministers of the Republic on October 7, 2013 No 274, describes in detail the activities of the “mahalla”(neighborhood) institute on interethnic harmony and religious tolerance has been given[13].

These and other documents also take into account the wishes of the representatives of religions living in our country. In particular, it is worth mentioning the fact that the Muslim Board of Uzbekistan broadcasts spiritual and enlightenment programs on central television, as well as large-scale celebrations of conferences dedicated to the birth of such famous scholars as Imam Bukhari, Imam Termezi, Imam Moturudi. It is especially commendable that all the conditions have been created for the full and unanimous performance of the Hajj. In turn, visits are made to shrines in Israel, Greece and Russia for Orthodox, Israel and Italy for Catholics, Israel and Armenia for Armenians, Israel for Jews and Baha’is, India for Krishnas, and Korea for Buddhists. In 1995, an inter-religious forum called "Under One Sky" was organized in Tashkent[14].

In addition, the Church of the Holy Virgin, built in 1903 by the decree of the first President IA Karimov, was transferred to the Armenian Apostolic Church. The fact that it was returned and in December 1996 the 100th anniversary of the beginning of the activity of this denomination in our country is a testament to the fact that the policy of religious tolerance in Uzbekistan is also implemented by the state[15].

During the years of independence, hundreds of mosques, churches, synagogues and houses of worship have been built and renovated in the country. These include the Hazrati Imam complex in Tashkent, the Minor mosque, mosques in regional centers, Russian Orthodox churches in Tashkent, as well as the Buddhist temple, the Armenian Apostolic Church in Samarkand, the Sultan Weiss Bobo and Muhammad Norimjoni shrines in the Republic of Karakalpakstan. we can see the church and so on. Along with the statues of Amir Temur, Mirzo Ulugbek, Alisher Navoi, Islam Karimov, Berdakh, Ajiniyaz, the statues of Ganjavi, Rustaveli, Pushkin, Shevchenko also adorn our streets and squares[16].

All this is a bright expression of inter-religious tolerance and inter-ethnic harmony. Muslims have provided financial support for the construction of three local temples in Turkestan. For example, “The construction of the Svyato-Georgiy temple in Chirchik, which is still in operation in the city of Chirchik, was paid for by the local imam. The fact that the Muslim traders Alimbekov dynasty is included in the list of major investors in the construction of the Svyato-Alekseev temple in Samarkand testifies to the fact that our nation has always been tolerant[17].

In 1998, the Imam al-Bukhari architectural complex was opened in Samarkand. In September 2000, Tashkent hosted a major international

conference of UNESCO on "World religions on the path to cultural peace"[18].

In addition, practical work has been done to facilitate religious education for people with disabilities. In particular, the Koran has been published several times in Braille, and on January 30, 2018, at the initiative of the Muslim Board of Uzbekistan, religious and enlightenment talks with people with disabilities were organized in Tashkent. To date, similar charitable work has been done with more than 400 people with disabilities[19].

That is why the great scholars of Islam, who grew up in our country, became famous not only in our country but also in the whole Muslim world. marked. In addition, in 1999, at the initiative of the President, the 1130th anniversary of another great scholar, Quranist and hadith scholar Imam Abu Mansur Moturudi was celebrated[20].

At the initiative of President Sh.M.Mirziyoev, the International Center for Islamic Studies was established in 2017 by Imam Bukhari and Imam Termezi. In conclusion, tolerance and interethnic harmony are the main guarantee of our peace.

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PHILOSOPHICAL ANALYSIS, DEFINITIONS AND CLASSIFICATION OF THE CONCEPT OF “HEALTH”

Abstract: *This article presents thoughts on the concept of health and its forms: the world of mankind, the possibility of using the relative flora and fauna. The expediency of studying by such types as the health of an individual, personality, social group, society, health of the people is noted, definitions and classification of each type are given. When studying the concept of "health", a comparison was made of philosophical analysis, definitions and classification of thinkers of the ancient period, the Middle Ages and modern scientists.*

Key words: *health, Hippocrates, Platon, Claudius Galen, Ismoil Zhurzhoniy, Abu Ali Ibn Sino, individual, personality, people, public health.*

Language: *Russian*

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ФИЛОСОФСКИЙ АНАЛИЗ, ОПРЕДЕЛЕНИЯ И КЛАССИФИКАЦИЯ ПОНЯТИЯ “ЗДОРОВЬЕ”

Аннотация: *В настоящей статье изложены мысли о понятии здоровья и его форм: мира человечества, возможность использования относительно растительного и животного мира. Отмечается целесообразность изучения по таким типам как здоровье индивида, личности, социальной группы, общества, здоровье народа, даны определения и классификация каждого типа. При изучении понятия «здоровья» проведено сравнение философского анализа, определений и классификации мыслителей античного периода, средних веков и современных ученых.*

Ключевые слова: *здоровье, Гиппократ, Платон, Клавдий Гален, Исмоил Журжоний, Абу Али Ибн Сино, индивид, личность, народ, здоровье общества.*

Введение

Понятия «здоровье» и «болезнь» являются одними из основных философских категорий, отражающих сущность и значение медицинской жизни общества и соответственно являются его составными частями. Без знания сути этих понятий, без определения их научного и практического значения невозможно решить проблему формирования и развития медицинской культуры населения, как одного из факторов, обеспечивающих ее устойчивость, при коренном изменении ее в соответствии с требованиями глобализации.

Основная часть

Следовательно, возникает вопрос, что же называется здоровьем. С древних времен до наших дней многие взгляды на этот вопрос выражались философами, врачами, лекарями и учеными других наук. Например, известный древнегреческий философ и лекарь Гиппократ, живший с 460 по 377 год до нашей эры, сказал: «Здоровье - это состояние, которое возникает и развивается из-за влияния внешней среды на организм человека» [Гиппократ. 3. –С.60], а Платон сказал следующее: «Жизнь человека управляется вечным духом. Он состоит из трех - ментального, животного и растительного духов. Ментальный дух находится в мозгу, животный

дух находится в сердце и крови, а дух растений находится в печени. Самым важным из них является животный дух, который придает телу тепло и движение. Дух растений в печени обеспечивает организм питательными веществами. Эти три духа действуют с помощью трех абстрактных сил. И здоровье, и болезнь зависят от этих трех духов. Была изложена такая мысль, что если человек живет, не уклоняясь от влияния этих духов, он будет здоров, а если отстранится, то заболеет» - таким образом обосновывается связь здоровья и болезни у людей с этими духами [Чикин С.Я. 7. -Р.23.], Клавдий Гален, один из самых известных философов и целителей древнего мира, живший с 130 по 201 год, сказал: Здоровье - это сочетание и баланс 4 элементов: влаги, физического тела, органов и сил, управляющих всем организмом. Вот почему мы не чувствуем боли, мы делаем то, что нам необходимо, например, моемся, пьем, кушаем и участвуем в лидерстве, все это является нашими повседневными задачами» [Гален из Пергама. 4. - С.36-38], - сказал он.

Исмаил Журжоний (1080 - 1141), один из наших предков, живший в Центральной Азии, писал в своих произведениях «Хоразмшох хазинаси»,

«Тиббиётининг мохияти»: «Здоровье - это устранение всех факторов, негативно влияющих на здоровье человека» [Кадыров А.А. 8. - В.98], а Абу Мансур Камари (наставник по медицине Абу Али ибн Сины) написал в своей книге «Бойлик ва Согломлик»: «Здоровье - это прежде всего нормальная, мирная жизнь. Для этого необходимо нормально питаться, избегать различных вредных привычек »[Кадыров А.А. 8. - В.102].

Шейхурраис Абу Али ибн Сина (980-1037), самый известный из наших великих предков, написал в своей энциклопедии «Каноны медицины»: “человеческое тело человека может быть в трех состояниях: здоровое, больное и третье состояние не имеет отношения ни к здоровому ни к больному” в то время как вы сделали два вида различий, человек, который приводит такой аргумент, если он хорошо подумает, он поймет, что нет третьего состояния, кроме двух, и что нам не нужно утверждение третьего состояния. Если необходимо третье состояние, конечно, наши слова о «физическом недомогании» не будут означать болезненное состояние, а также третье состояние, которое не подходит под определение здоровья. Здоровье – это такая квалификация или состояние, при котором появляются оздоровительные действия в органах. Альтернативы этому определению здоровья не существует. Но участники диспутов определяют здоровье по-своему и включают в определение здоровья, состояния, которые им даже не нужны. Спорить с врачами по этому поводу не приходится. Врачи тоже не спорят о таких вещах. Беседы с врачами или с людьми, которые с ними не согласны, в медицине бесполезны. Но познание истины в этом вопросе принадлежит правилам другой науки, то есть науки логики. Пусть истина будет требоваться от логики! » [Абу Али ибн Сино. 1. - В.12], - написал он.

Из этих определений понятия «здоровье» также становится ясно, что они включают: *во-первых,* решающую роль внешней среды; *во-вторых,* контроль некоего абсолютного духа; *в-третьих,* первичные элементы, составляющие основу всей вселенной; *в-четвертых,* состояние органов человеческого тела при выполнении функциональных задач и т. д. Такой подход к вопросу зависит, *во-первых,* от существующих условий защиты здоровья человека; *во-вторых,* недостаток лекарств, которые служат для поддержания здоровья человека; *в-третьих,* необходимость выполнения требований преобладающего в обществе философского мировоззрения; *в-четвертых,* это было связано с тем, что правящие круги заботились не только о здоровье всего населения страны, но и о своем здоровье, своих близких и родственников.

С середины XX века до начала XXI века в области медицины изучалось строение человеческого тела и организма, их функции, влияние на них природной и социальной среды, особенности человеческого разума в состоянии здоровья, использование новых методик и технологий в медицине. Великие открытия были сделаны в компьютерном моделировании процессов в системе здравоохранения, использовании нанотехнологий в лечении, открытии секретов клеточной ДНК и РНК, а полученные результаты стали применяться на практике. Это, в свою очередь, расширило философское содержание традиционного понятия «здоровье» и потребовало его философского переосмысления на основе новых научных достижений. Следовательно, с середины двадцатого века мы видим, что понятие «здоровье» получило следующие философские определения учеными-медиками, философами, социологами, политологами и другими подобными специалистами.

Историк медицины, профессор Сигерист, Зигерист (Сигерист) Генри Эрнст (7.4.1891, Париж, - 17.3.1957, Пура, Тессин, Швейцария) изучал историю медицины с социальной, экономической, организационной и философской точек зрения. «Здоровым можно считать человека, который отличается гармоничным развитием и хорошо адаптирован к природной и социальной среде. Здоровье - это не просто отсутствие болезней: это положительный момент, это означает, что в жизни радостно и старательно

выполняются взятые на человека обязанности» [Генри Эрнест Сигерист. 5. Социализированная медицина в Советском Союзе, Н. Ю. 5; Лисицын Ю. П., Венгрова И. В., Памяти Г. Е .. Zigerista. 6], - сказал он. Следовательно, хотя ученый признает здоровье как адаптацию человеческого тела к естественной и социальной среде, он не комментирует механизмы его адаптации.

Основоположником термина валеология (лат. Valeo - «будь здоров») был доктор медицинских наук, профессор И.И. Брексман: «Здоровье - это способность поддерживать устойчивость при резких изменениях количественных и качественных параметров тройственного потока, состоящего из сенсорной, вербальной и структурной информации, соответствующей возрасту человека» [Brexman, Israel Itskovich. 2. –P. 206], - Интерпретируя здоровье как сопротивление потоку информации, имеющей сенсорные, вербальные и структурные структуры, ученый игнорирует тот факт, что на его происхождение и развитие могут влиять другие факторы, помимо потока информации.

Один из ведущих ученых России А. Г. Щедрина дает следующие разъяснения: «Здоровье - это целостная многомерная динамика (включая ее положительные и отрицательные показатели), которая развивается в четкой социальной и природной среде, позволяя человеку выполнять свои биологические и социальные функции» [Щедрина А.Г.].

Когда мы анализируем определения, данные экспертами ВОЗ и А. Г. Шедриной, первое из них - это статическое (греч. Statikos - стояние, позиционирование; стояние) состояние здоровья, при котором наличие или отсутствие здоровья никак не определено. Точнее, здоровье определяется и описывается обществом как набор конечных показателей общественного здоровья, которое характеризует медицинскую жизнь общества. Второе определение описывает здоровье динамически, с упором на тот факт, что здоровье формируется на регулярной основе с развитием человеческого тела. Однако в определении также говорится, что здоровье запрограммировано генетически. Однако взаимосвязь между статикой и динамикой не была четко сформулирована при реализации генетической программы.

Один из основоположников космической биологии и медицины П.М. Баевский рассматривает гибкость человеческого тела как ключевой фактор здоровья, он писал: «Здоровье - это способность человеческого организма адаптироваться к изменениям окружающей среды, основанная на его биологической, психологической и социальной природе, способности взаимодействовать друг с другом» [Баевский Р.М.]. В этом определении ученый правильно определил факторы, влияющие на здоровье человека, но интерпретировал это как продукт свободного контакта с окружающей средой, т.е. односторонний контакт. Но как известно, любая свобода - это осознанная необходимость.

Н.О. Граевская пишет: «Здоровье - это оценка уровня функциональных возможностей организма, его компенсаторно-приспособительных реакций в экстремальных условиях, т. е. способности без патологических симптомов адаптироваться к возрастающим требованиям внешней среды» [Граевская Н.Д.]. Ученый остановился на вопросе восполнения запасов в экстремальных условиях здоровья. Однако в экстремальных условиях он всегда упускал из виду тот факт, что человеческое тело может быть не в состоянии компенсировать себя или адаптироваться.

Принимая во внимание биосоциальные характеристики человека, Ю.П. Лисицын заключил: «Здоровье - это гармоничное сочетание биологических и социальных качеств, возникающих благодаря врожденным и приобретенным механизмам здоровья человека» [Лисицын Ю.П. 6.]. Это определение не отражает того факта, что «здоровье» и «болезнь» имеют свои особенности, и вопрос об их гармонизации еще не решен.

В. П. Казначеев: «Здоровье человека - это процесс сохранения и развития его биологических, физиологических и психологических возможностей, оптимальной социальной активности с максимальной продолжительностью жизни. При этом необходимо обращать внимание не только на охрану здоровья человека, но и на условия, обеспечивающие его развитие и необходимость создания таких гигиенических систем »[Казначеев В.П.]. С этим мнением можно согласиться.

Н .А. Агаджанян изучая биологические ритмы человека, приходит к «выводу об оптимальном соотношении взаимосвязанных эндогенных ритмов физиологических процессов здоровья и их адаптации к внешним циклическим изменениям» [Агаджанян Н.А.]. Это физиологически определение здоровья, можно использовать как естественно-медицинскую основу.

Известный кардиохирург Н.М. Амосов сказал: «Здоровье - это уровень функциональных возможностей организма человека, спектр его компенсаторно-приспособительных реакций в экстремальных условиях, то есть каков уровень резервных возможностей организма [Амосов Н.М.]. Здоровье, как говорит ученый, - это не реакция уровня резервов организма на экстремальные условия, а продукт процессов,

сформированных целым рядом факторов, больших и малых, известных и неизвестных.

Э. Н. Вайнер сказал: «Здоровье - это состояние организма, которое позволяет человеку выполнять свою генетическую программу в максимально возможной степени в контексте социально-культурной жизни человека [Вайнер Е.Н.]. Но Э. Вайнер не дает этому экспериментального обоснования. Однако до сих пор не изучены не только степень реализации генетической программы человека, но и функциональное назначение генов.

Физиологический (биомедицинский) подход, основанный на основных принципах жизнедеятельности человеческого организма, послужил основанием для определения здоровья Р. И. Айзмана. «Здоровье - это способность человеческого организма сохранять психофизиологическую устойчивость (гомеостаз) в условиях адаптации к стрессам, вызванным различными факторами внешней среды» [Айзман Р.И.]. Это определение имеет психофизиологическое значение и тем или иным образом дополняет философские определения концепции здоровья.

Кратко анализируя приведенные выше определения и описания «здоровья» с философской точки зрения, мы не намерены отрицать их все, и стараемся оценивать их как определения, основанные на задачах, поставленных перед медицинскими науками.

Мы считаем, что понятие «Здоровье» может быть определено в свете изменений, происходящих в контексте глобализации и научно-практической работы, значении проводимых реформ в нашей стране для защиты здоровья человека. Это такие определения как:

1. Каждый человек является биологическим существом с точки зрения его онтологической природы, согласно структуре его физического тела и органов, а также функциям, которые они выполняют. Соответственно, биологическое здоровье - *это специфическая система действий всех организмов в физическом теле человека, направленная на полное выполнение их функциональных задач за счет их приспособляемости к окружающей среде в соответствии с законами природы.*

2. Любой человек - это сознательное, разумное существо с уникальными умственными способностями, которое имеет способность понимать себя и окружающих в соответствии со своими гносеологическими характеристиками. *Соответственно, психическое здоровье относится к системе всех психических процессов человека - интуиции, восприятия, памяти, воображения, мышления, речи, внимания, эмоций, воли, способностей, навыков и привычек, которые способны нормально выполнять свои функциональные функции.*

3. Каждый человек - это совокупность социально-экономических, политико-правовых, духовно-культурных связей, которая является главной движущей силой общественного существования, сочетающей способность эффективно работать физически и умственно, что характеризует его как творческое существо. Соответственно, *Здоровье - это состояние гармонии физического и психического потенциала трудолюбивых людей, сформированное и развитое в процессе материального и духовного производства, обеспечивающее чистоту, чистоту, безупречность, полностью отвечающее требованиям здоровья. Нарушение этого условия может сделать процесс материального и духовного производства «больным».*

Выводы

Из всех описанных выше определений также ясно, что понятие здоровья имеет такие формы, как здоровье, здоровый, оздоровление, оздоровительный и может применяться как к миру растений и животных, а также и к миру людей.

Классификация феномена здоровья осуществляется, прежде всего, в зависимости от расположения живых организмов в пространстве и времени:

- здоровье природы, то есть флоры (деревья, кустарники, леса, растения, фруктовые деревья и т. д.) и фауны (дикие и домашние животные, птицы, рептилии, рыбы и т. д.);

- человечность, то есть здоровье людей, молодых и старых.

Во-вторых было бы целесообразно классифицировать, в зависимости от владельцев – индивида, личности, социальной группы, сообщества, состояния здоровья населения.

В то же время здоровье индивидуума - это физически нормальное состояние существа, которое еще индивидуально формируется в утробе матери как биологическое существо.

Здоровье человека - это образ жизни в физической и психической гармонии без какой-либо боли в человеке-индивидууме, который осознает себя и происходящие вокруг него события, имеет независимое мышление и имеет чувство ответственности в конкретной ситуации.

Здоровье социальных групп - это состояние свободы от различных заболеваний людьми, которые работают вместе с определенной целью, а также сообществами труда и обслуживания, а также различными ассоциациями, союзами, организациями.

Здоровье населения - это здоровье и благополучие людей, живущих в определенном районе. Здоровье населения страны - залог мира и устойчивого развития общества.

Здоровье сообщества - это состояние возможности создавать материальные и духовные ценности для выживания членов общества в борьбе между здоровьем и болезнью, создавать условия для осмысленной жизни, основанной на его соблюдении.

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WAYS TO ENHANCE THE MECHANISM OF CALCULATING AND PAYING LAND TAX IN THE REPUBLIC OF UZBEKISTAN

Abstract: *This article explores approaches to the improvement of objects of taxation of land tax in Uzbekistan and the establishment of tax rates. The analysis of tax revenues on land tax in the Republic of Uzbekistan, the general trends in land taxation of legal and persons and individuals. The problems of taxation of land in the Republic of Uzbekistan are identified and methods for determining the tax base taking into account international experience. Land tax rates, which are levied on the legal entities and population for the use of land areas located in the rural areas.*

Key words: *tax, taxation, land tax, legal entities, tax rates, local budget, tax rates for legal and individuals.*

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Introduction

Nowadays, issues, related to the situation around the tax system and collection in Uzbekistan, its functional realization, are primary both for the state and for the majority of organizations and citizens of the country. The necessity of the tax collection for the benefit of the country is always perceived very painful, so the most important task of the country is the creation of effective tax policy both on the state and on the local levels. Today, the majority of municipal budgets do not have independent, from the economic point of view, budget, thus they cannot fully execute their power.

In the times of economic falls, substantial difficulties come up for local authorities, whose profits are formed as the result of own tax and non-tax revenues, and gratuitous income – grants and subsidies. Own income of local authorities are formed from the local taxes and collections, other own income, and shares from state taxes.

On the territory of the Republic of Uzbekistan, the following taxes are established: value-added tax, excise tax, income tax, individual income tax, subsoil use tax, water use tax, property tax, land tax, social tax.

On the territory of the Republic of Uzbekistan, levies can be established. The order of introduction, calculation and payment of fees is determined by Tax code and other legislative acts. Moreover, code regulates the order of calculation and payment of motor transportation fee, while the order of calculation and levy of the state fee is established by state fee legislation. [1]

Taxes have a decisive role in shaping incomes of any budget, both state and local. Payments, which transfer part of the funds owned by legal entities and individuals to the state, are called taxes.

They are part of the country's national income and are involved at all levels of the budget system, which consists of mandatory payments by legal entities and individuals to the state on time and in a predetermined amount in accordance with the law.

Taxes create a financial foundation for the realization of the functions and duties of the country. Government cannot function without taxes, because they are one of the main elements of attracting

revenues to the budget within the realities of the market economy and dominance of private property.

Taxes are the objective necessity for any country in making decisions and ensuring their compliance. This objective necessity defines its gist. The opinions of scientists around the world, including scientists from our country, in determining taxes have something in common and concrete. Therefore, taxes are the necessity for the existence of the government and are payments, which do not give their payers an individual equal right and which are required to be levied at the rates, established for the financing state and local authorities, and for the execution of state functions. [2]

Since January 1, 2020, in the practice of taxation of legal entities and individuals, the following order of land taxation has been established: [1]

On the property tax on legal entities:

The tax rate is maintained at 2%, the tax rate for the objects, whose construction is not completed during the regulatory period, is set at 4%. In this case, measures can be taken by setting higher tax rates in the legislation on empty buildings, unused manufacturing areas, non-residential buildings, as well as unfinished objects, and property tax benefits do not apply to them. Instead of previously granted benefits, a decreased tax rate of 0.2% is applied for the following immovable objects:

- public railways, trunk pipelines, communication and power lines, and constructions, which are significant technological part of these objects;
- real estate and unfinished objects, which are on conservation by the decision of the Cabinet of Ministers of the Republic of Uzbekistan.

Fully depreciated buildings are subject to property tax at least once every three years based on revalued (market) value.

Property tax exemption is applied in the way of reduction of the tax base to the average annual residual value of the property on the balance sheet of agricultural enterprises used for production and storage of agricultural products.

Non-residents of the Republic of Uzbekistan, who do not act in the Republic of Uzbekistan through a permanent embassy, pay a tax once a year no later than February 15 of the year following the reporting period.

On the property tax on individuals:

The tax rates are at the same level as in 2019. In this case, when calculating the property tax of individuals in 2020, the amount of tax on the cadastral value should not exceed 30% of the amount of the tax assessed for 2019.

The deadline for the tax authority to notify the taxpayer on the payment must be no later than March 1.

The period for tax payment is set twice a year in equal installments from April 15 to October 15.

On the land tax on legal entities:

Tax rates on the non-agricultural land for 2020, and tax rates on the land for agricultural enterprises, growing fruits and vegetables, are established by the Law of the Republic of Uzbekistan dated December 9, 2019, No. ZRU “On the state budget of the Republic of Uzbekistan for 2020”.

The tax rate on agricultural land is established at 0.95% of the regulatory value of agricultural land.

For the lands, occupied by the unfinished objects, the tax is paid at a double tax rate, unless the law does not consider other cases.

Empty buildings, unused production facilities, non-residential buildings, and the areas, occupied by the unfinished objects, may be sanctioned by establishing higher tax rates in the legislation, and tax benefits do not apply to them.

In some cases mentioned by the government, a coefficient of 0.1 is applied to the land tax rate.

Coefficient of 0.1 to the tax rates is introduced instead of benefits, which were previously granted, and is applied to the lands, which are provided to the legal entities in a prescribed order.

If the quality of agricultural land improves (when the quality indicator increases), the tax is paid by the legal entities on the basis of the new quality indicator from the beginning of the year following the year of land valuation, without recounting at the end of agricultural activities.

On the land tax on individuals:

The order of calculating and paying the land tax by individuals is maintained. The deadline for the tax authority to notify the taxpayer on the payment must be no later than March 1. The period for tax payment is set twice a year in equal installments from April 15 to October 15.

The land tax rates, which are the part of the local taxes, are annually established by the Law of the Republic of Uzbekistan by considering the classification by zones, quality, productivity, and other indicators of the land on which the region, city and district are located. [3]

The following tables provide examples of land tax rates, which are levied on the legal entities for the use of land areas located in the rural areas, and the land tax rates, which are levied on the population for the use of land areas located in the rural areas.

Table 1. Land tax rates, which are levied on the legal entities for the use of land areas located in the rural areas

№	Republic, region	Land tax rates for 1 ha, in UZS:				
		For the lands provided to the legal entities, by zones			For the lands occupied by mines and quarries, by zones	
		Irrigated		Non-irrigated	Irrigated	Non-irrigated
		in populated areas	in non-populated areas			
1.	Republic of Karakalpakstan					
	Northern zone	8 176 434	7 591 397	370 655	2 144 278	72 759
	Central zone	9 082 271	8 440 061	458 695	2 385 234	114 553
	Southern zone	10 091 373	9 380 246	504 663	2 637 127	137 599
2.	Andijan region	10 320 788	9 598 416	516 207	2 947 294	149 254
3.	Bukhara region	9 976 618	9 369 072	504 642	2 637 418	137 649
4.	Jizzakh region	9 288 551	8 783 966	470 306	1 926 539	91 748
5.	Qashqadaryo region	9 288 551	8 783 966	470 306	1 857 649	91 748
6.	Navoiy region	9 632 677	9 116 490	481 548	2 293 504	114 566
7.	Namangan region	9 472 022	9 059 204	458 695	2 798 141	137 649
8.	Samarqand regiion	10 894 006	9 999 657	550 456	3 486 134	171 906
9.	Surxondaryo region	11 926 180	10 779 485	596 372	4 518 106	229 388
10.	Sirdarya region	9 288 551	8 852 932	470 306	1 949 369	103 326
11.	Tashkent region	10 894 006	9 976 618	550 456	3 451 876	171 906
12.	Fergana region	9 976 618	9 334 447	504 642	2 591 547	125 979
13.	Xorazm region	10 091 373	9 380 309	504 642	2 648 887	137 649

Table 2. Land tax rates, which are levied on the population for the use of land areas located in the rural areas

№	Republic, region	Land tax rate for 0.01 ha, in UZS			
		Agricultural lands			Lands dedicated for the public gardening
		Irrigated areas		Non-irrigated areas	
		In populated areas	In non-populated areas		
1.	Republic of Karakalpakstan				
	Northern zone	4 792,1	2 402,4	479,3	2 534,3
	Central zone	7 674,1	3 839,2	777,2	-
	Southern zone	8 525,2	4 261,6	855,6	3 135,2
2.	Andijan region	9 009,9	4 501,4	893,6	3 492,1
3.	Bukhara region	8 513,5	4 254,4	789,5	3 119,7
4.	Jizzakh region	7 979,2	3 990,8	573,4	2 242,0
5.	Qashqadaryo region	7 979,2	3 990,8	565,9	2 196,5
6.	Navoiy region	8 282,3	4 139,3	683,8	2 717,2
7.	Namangan region	8 625,9	4 314,1	855,6	3 309,8
8.	Samarqand region	9 098,3	4 550,0	1 054,6	4 114,9
9.	Surxondaryo region	9 809,5	4 906,6	1 378,5	5 358,0
10.	Sirdarya region	8 045,2	4 023,6	595,2	2 300,7
11.	Tashkent region	9 076,5	4 538,9	1 047,4	4 088,3

12.	Fergana region	8 487,7	4 244,3	782,0	3 064,3
13.	Xorazm region	8 525,2	4 261,6	806,6	3 135,2

The land fund of the Republic of Uzbekistan in accordance with the main purpose of the lands is divided into the following categories: [4]

lands of agriculture – lands dedicated to the needs of agriculture. Agricultural lands are subdivided into irrigated and non-irrigated (rain-fed) lands, arable lands, lands occupied by hayfields, pastures, perennial fruit plantations and vineyards;

lands of populated areas (cities, villages and rural areas) – lands located within the territories of cities, villages and rural areas;

lands of industry, transport, communication, defense and other purposes – lands provided for the use by the legal entities for mentioned purposes;

lands of environment, wellness and recreational purposes – lands occupied by the protected natural areas, which have primary ecological, scientific, cultural, aesthetic, recreational and sanitary-health significance;

lands of historical-cultural purposes – lands occupied by the objects of tangible cultural heritage;

lands of the forest fund – lands that are covered by the forest and lands that are not covered by the forest, but provided for the needs of forestry;

lands of the water fund – lands occupied by the water objects, water constructions and allotment zones along the banks of water objects;

land of stock.

Record of information on state registration of the rights of ownership, use, lease and tenure of the land, and easements and other restrictions on these rights, record of information on the quantity of the lands, record on the quality of the lands (soil appraisal) and land valuation are the components of the state land cadaster. [5]

Currently, land tax is one of the main sources of revenue for the local budgets. Moreover, its amount impacts the personal disposable revenue of almost every citizen of Uzbekistan. Unfortunately, at the moment, income from the land tax is extremely small.

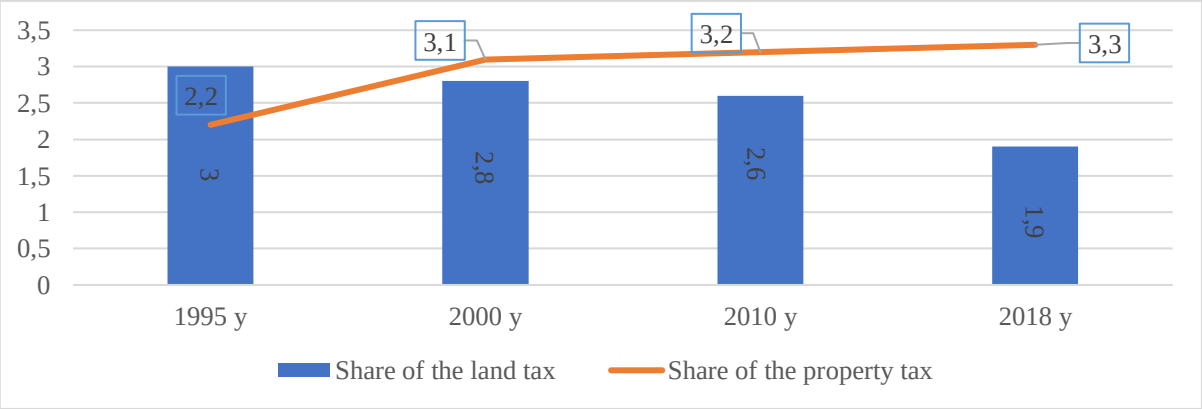
The data provided in the picture show a corresponding trend in the republic and around the world.

During the period from 1995 to 2018, the proportion of property tax in total revenues of the budget has increased from 2.2% to 3.3%, and the proportion of the land tax has decreased from 3.0% to 1.9%.

We can say that this situation was impacted by other factors too, including the industrialization of the republic.

Firstly, as the private entrepreneurship and business develop in our country, their property tends to increase, but the area of the land remains almost constant.

The second reason is the application of the progressive rates to reduce the scale of benefits, depending on the area of residential premises located on property tax rates for individuals, in order to encourage the expenditures of individuals on the construction of the elite residential premises for the development of the entrepreneurship.



Pic.1. The change of the proportion of property and land taxes in total state budget revenues of Uzbekistan in 1995-2018, in % [5]

The size of the land tax does not depend on the financial results of taxpayer's activities, but depends only on the cadastral valuation, which is influenced only by objective factors (size and location of the land, fertility, type of the land).

It is worth to mention current difficulties with the collection of land tax, and as the improvement and to solve a number of problems, to propose the measures presented in Table 1.

Table 3. Problems of the land tax and ways to solve them [6]

Problems	Solutions
Land tax does not have a regulatory role, barely influences the level and nature of land use, does not encourage the application of the most effective methods of agriculture.	Through tax regulation, it is necessary to create facilities, under which it will be impossible to have unused lands or it will be unprofitable to use them. The adoption of such measures for the rational use of the land areas will provide the basis to increase the responsibility of the owners of unused land areas for the rational and targeted use of these objects and to involve enterprises in the economic activities and creation of new jobs.
In practice, taxpayers quite often do not submit tax reports to the tax authorities at the place of registration by the dates established by law on taxes and fees.	In order to strengthen the responsibility of taxpayers, it is necessary to make amendments to the legislation to increase the size of penalties for those taxpayers who do not submit tax reports in established periods.
In most cases, the land is not used for its targeted purpose.	Local authorities need to conduct activities aimed at the issue of completeness of accounting for the tax objects on land tax.
Results of the cadastral valuation of the land do not correspond to the current economic situation. There is a significant difference between the market and the cadastral value of the land.	The land valuation must be done by third-party specialized valuation companies with a great reputation and wide practice of valuation, which are not interested in undervaluation of the cadastral value of the land.
Differentiation of the land tax does not fully reflect the differences in location and fertility of the land areas even within the same district or region.	Stocktaking and monitoring of land areas

Let us analyze the table and dwell on some important problems of the land tax. In order to increase the productivity of the work with the land tax, it is necessary to analyze the data about the land-users and to tighten the responsibility measures on the submitting the relevant information by the state cadastral authorities to the tax authorities.

Moreover, it is possible to propose carrying out activities in every municipality aimed at the cooperation of tax authorities with the municipal authorities on the issue of the completeness of accounting on taxation of land tax. Indeed, the successful solution of the issue of increasing the collectability of land tax and replenishment of the local budgets largely depends on how close is the interaction between tax and municipal authorities.

Development of the land relationships is a process that is associated with the objective changes of productive forces and production relationships in the society. Thus, the emergence of new forms of land taxation is quite logical.

Many regions of the country have developed relevant targeted programs aimed at increasing the collection of land tax and rent, increasing the productivity of local land control, in which all problems are grouped in three main directions: increasing the collectability of the land tax, optimizing the collection of other income for the use of land areas, increasing the effectiveness of the land control.

Programs, which were developed in different regions of the country to increase the collectability of the land tax, imply making a unified electronic base of all land areas to analyze data about the users of the land, which are available at the local authorities. The task of the tax authorities is to increase the productivity of administration, which can be achieved by the integration of new technological solutions and improvement of the analytical work.

CONCLUSION

The problem of the reliability of the information in the databases of the tax authorities is proposed to be solved with the interaction of the tax bodies not only with state cadastral bodies, but also with the local executive bodies.

In addition, it is proposed to take measures to tighten the control by the tax bodies over the inappropriate use of the land areas and application of the liability measures for illegal use of the land area.

The proposed directions for the improvement of the land tax can encourage the increase of the size of the tax base for the land tax, income from the land tax to the local budgets and, as a consequence, strengthen own revenue base of the municipalities, increase in the level of their fiscal autonomy.

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CiteFactor (USA) Directory Indexing of International Research Journals
http://www.citefactor.org/journal/index/11362/theoretical-applied-science

JIFACTOR
http://www.jifactor.org/journal_view.php?journal_id=2073

Eurasian Scientific Journal Index (Kazakhstan)
http://esjindex.org/search.php?id=1

SJIF Impact Factor (Morocco)
http://sjifactor.inno-space.net/passport.php?id=18062

InfoBase Index (India)
http://infobaseindex.com

Электронно-библиотечная система «Издательства «Лань» (Russia)
http://e.lanbook.com/journal/

International Institute of Organized Research (India)
http://www.i2or.com/indexed-journals.html

Journal Index
http://journalindex.net/?qi=Theoretical+%26+Applied+Science

Open Access Journals
http://www.oajournals.info/

Indian citation index (India)
http://www.indiancitationindex.com/

Index Copernicus International (Warsaw, Poland)
http://journals.indexcopernicus.com/masterlist.php?q=2308-4944

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Correspondents and Academicians

Reception of documents is carried out till January 25, 2021.
Documents you can send to the address T-Science@mail.ru marked "Election to the Academy members".

The list of documents provided for the election:

1. Curriculum vitae (photo, passport details, education, career, scientific activities, achievements)
2. List of publications
3. The list of articles published in the scientific journal ISJ Theoretical & Applied Science
   * to correspondents is not less than 7 articles
   * academics (degree required) - at least 20 articles.

Detailed information on the website http://www.t-science.org/Academ.html

Presidium of the Academy

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2. Список научных трудов
3. Список статей опубликованных в научном журнале ISJ Theoretical & Applied Science
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   * для академиков (необходима ученая степень) - не менее 20 статей.

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Presidium of the Academy

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