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## Opportunities for increasing labor efficiency based on human capital management

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**Abstract:** An approach is proposed that makes it possible to increase the efficiency of labor at the level of the type of economic activity through the management of the human capital of organizations. Based on the analysis of the rating of the human development index, the most important gaps in the key parameters of the rating were identified and the priority directions for increasing the level of the human development index were substantiated. The structure of the system for managing the formation of human capital within the framework of the type of economic activity was formed, on the basis of which a hierarchy of tasks for managing human capital was developed in the scale of the type of economic activity based on the Ishikawa diagram. The author's algorithm for assessing the influence of factors of the external and internal environment on the state of human capital in the scale of the type of economic activity has been built, and the key factors of motivating intellectual workers to continue working in this organization have been identified.

**Keywords:** labor efficiency, human capital, type of economic activity, human development index, labor quality.

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### INTRODUCTION

Human capital is one of the most important elements of the overall incentive system in organizations. Therefore, improving labor efficiency is directly related to efforts to manage human capital. Speaking about the Russian experience in human capital management at the level of the type of economic activity, it is necessary to understand that the basis of any type of economic activity, as a rule, is made up of rather large specialized companies that have extensive and proven tools for the development and implementation of managerial innovations in the personnel management system. Nevertheless, it must be admitted that recently small and medium-sized companies of an entrepreneurial type began to appear, which are focused on creating their own tools for managing personnel and human capital.

### METHODOLOGY

Let's consider the main approaches to human capital management in Russian organizations, taking into account the assumptions made. First of all, it is advisable to assess the place of Russia in the global rankings of human capital. As can be seen from the results of official statistical studies (Table 1), Russia ranks 49th in the general index of human development. It is important to understand here that depending on the country, not only the external environment changes, but also the mentality of a person (Van Marrewijk M., Timmers J., 2003). Therefore, the analysis is carried out on the basis of comparisons and indirect comparisons.

**Table 1: Latest Human Development Index (HDI) Ranking**

Place	Country	Human Development Index (HDI)	Life expectancy from birth	Expected number of years of study	The number of years of actual study	GDP per capita
1	Norway	0,954	82,3	18,1	12,6	68,059
2	Switzerland	0,946	83,6	16,2	13,4	59,375
3	Ireland	0,942	82,1	18,8	12,5	55,660
4	Germany	0,939	81,2	17,1	14,1	46,946
4	Hong Kong	0,939	84,7	16,5	12,0	60,221

6	Australia	0,938	83,3	22,1	12,7	44,097
6	Iceland	0,938	82,9	19,2	12,5	47,566
8	Sweden	0,937	82,7	18,8	12,4	47,955
9	Singapore	0,935	83,5	16,3	11,5	83,793
10	Netherlands	0,933	82,1	18,0	12,2	50,013
49	Russia	0,824	72,4	15,5	12,0	25,036

Source: Latest Human Development Index (HDI) Ranking. // URL: <http://hdr.undp.org/> (date of circulation 10.07.2020).

If we consider the lag behind the leaders in terms of specific indicators, we see that the largest gap is observed in terms of GDP per capita (lagging behind the leader 63.3%), as well as in the expected duration of study (lagging behind the leader 14.4%). And if the first indicator can be adjusted, for example, through the rate of the national currency, then the second indicator indicates the systemic task of renovating the entire national education system in Russia.

Also, within the framework of this issue, it is necessary to take into account that the level of human capital development within Russia has a fairly wide variety, which is determined by the structural features of the economy of specific regions, as well as the historically determined level of their economic development at the present time (Table 8). The highest values of human capital development are observed in Moscow, St. Petersburg, as well as in the Khanty-Mansiysk and Yamalo-Nenets Autonomous Okrugs, where the index values exceed 0.9.

**Table 2: Human development index of Russian regions: by type of regions and federal districts in 2017.**

County	Highly developed		Developed			Medium developed		Less developed		Average weights for FD, type, country *
	Financial and economic centers	Commodity, export benchmark.	With diversified economics	Based on processing -tyv. prom	Based on mining . prom	Industrial-agrarian	Agrarian - industrial	Less developed raw materials	Less developed agrarian	
Central Federal District	Moscow region. (0,882) Moscow (0,960)			Lipetsk region (0,886) Yaroslavl Region (0,879)	Belgorod region. (0,906)	Vladimir region (0,851) Ivanov. region (0,827) Kaluga. region (0,874) Kostrom. region (0,849) Ryazan region (0,871) Smolen. region (0,851) Tver region (0,851) Tula region. (0,867)	Bryansk region (0,844) Voronezh region. (0,882) Kursk region (0,879) Oryol region (0,869) Tambov region. (0,867)			0,872
Northwestern Federal District	St. Petersburg (0,945)	Komi (0,893) Nenets Autonomous		Vologod. region (0,869)	Murmansk region. (0,869)	Karelia (0,860) Kaliningrad	Pskov region. (0,828)			0,878

		District (0,895)		Lenin. region (0,862) Novgo- rod. reg. (0,867) Archan- gel. reg. (0,890)		region. (0,874)				
Southern Federal District			Rostov region. (0,869 )				Krasno- dar. edge (0,879) Astra- khan. re- gion (0,886) Volgo- grad. re- gion (0,867) Crimea (0,831)		Adygea (0,842) Kalmykia (0,853) Sevastopol (0,832)	0,857
North Caucas- us Federal District							North Ossetia (0,848) Stavropo- l region (0,847)		Dagestan (0,844) Ingushetia (0,833) Kabardino- Balkaria (0,826) Karachay- Cherkessia (0,825) Chechnya (0,807)	0,833
Volga Federal District			Ta- tarstan (0,914 ) Nizheg- o-ge- nus. region (0,873 ) Sa- mara region. (0,884 )		Bashko rtostan (0,865) Perm region (0,876)	Udmurt ia (0,878)	Mari El (0,854) Mordovi a (0,863) Chuvashi a (0,852) Kirov region. (0,857) Orenburg . reg. (0,876) Penza. reg. (0,861) Saratov. region (0,865) Ulyanov. reg. (0,858)			0,870
UFO		KhMA O (0,911)	Sverdl ov. region	Chelya binsk			Курганс кая обл. (0,843)			0,889

		YaNA O (0,901)	(0,889) Tyumen region (0,914)	region. (0,879)						
SFO			Novosib. reg. (0,883)	Krasnoyarsk region (0,892) Irkutsk region. (0,877) Omsk region. (0,879)	Kemerov. region (0,862) Tomsk region. (0,891)	Khakassia (0,860)	Buryatia (0,830) Altai region (0,838)	Transbaikalian edge (0,836)	Altai (0,826) Tyva (0,801)	0,857
DFO		Sakha (0,897) Sakhalin reg. (0,886)				Kamchatka Territory (0,845) Primorsky Krai (0,848) Khabarovsk region (0,857)		Amur. reg. (0,840) Magadan. reg. (0,893) Chukotka Autonomous Okrug (0,858)	Jewish Autonomous Region. (0,801)	0,867
*	0,929	0,901	0,888	0,879	0,879	0,859	0,857	0,860	0,829	0,866

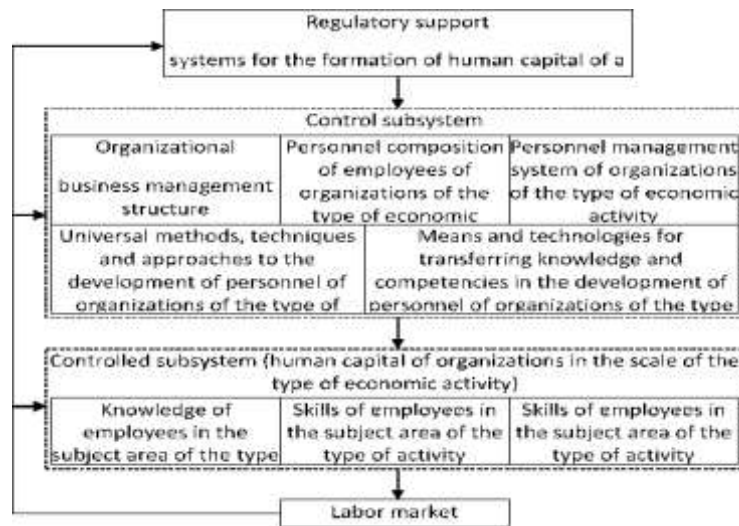
Source: L.M. Grigoriev. (2019).

As a rule, these assessments indicate the situation in a specific territory and describe the efforts of the authorities to develop a favorable living environment for the population. With regard to the objectives of the study, it is necessary to additionally consider options for increasing human capital through the efforts of business in the field of targeted impact not only on the quality of life, but also on working conditions, the development of workers and the introduction of human innovation in everyday activities.

## RESULTS

According to our observations, Russian practice is somewhat different from that of foreign countries (Collin M., Weil D. N., 2020). If the main emphasis in foreign organizations has recently been made on the quantitative assessment of talents and the creation of conditions for their attraction and progressive development within the framework of specific organizations, the Russian management system uses other approaches as well.

In particular, A.S. Matveeva believes that the most important elements of human capital in Russian conditions are knowledge, skills and abilities. Knowledge management approaches are used to develop them (Figure 10).

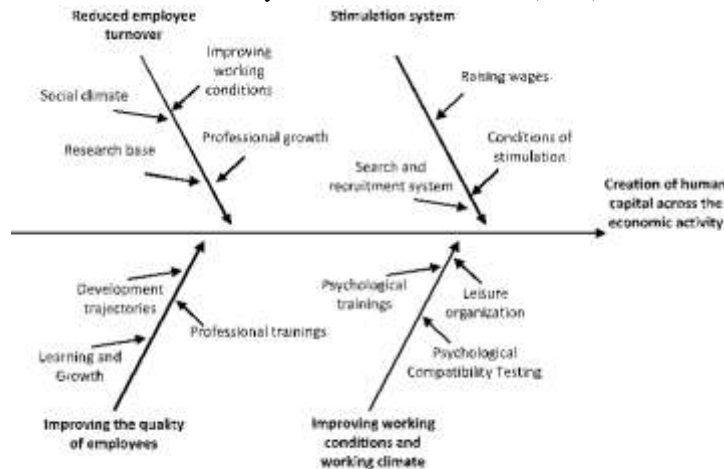


**Figure 1: Management system for the formation of human capital within the framework of the type of economic activity**

Source: adapted by the author based on: A.S. Matveeva. (2015).

In the presented model of the control system, the main methods, techniques and approaches are mentioned without detail. Nevertheless, it can be understood from the figure that the whole set of methods, techniques and approaches should cover various properties of human capital that make up the controlled subsystem. The most complete logic of methods of human capital management in the scale of the type of economic activity is described by Steblyanko-Avrarmenko M.S. using the Ishikawa diagram (figure 11).

Source: adapted by the author based on: Steblyanko-Avrarmenko M.S. (2014).



**Figure 2: Hierarchy of tasks for managing human capital across the type of economic activity (Ishikawa diagram)**

Thus, in the most general form, the methods of human capital management at the level of the type of economic activity are grouped into the following blocks: methods of reducing staff turnover, methods of stimulation, methods of improving the quality of workers, methods of improving working conditions and working climate. Complementing the point of view of N.L. Borshcheva, we propose to use a comprehensive assessment of the factors of the state of the external and internal environment affecting human capital in order to solve the problems of human capital management in the scale of the type of economic activity (figure 12).

Source: adapted by the author based on: Borshcheva, N.L. (2016).



**Figure 3: Algorithm for assessing the influence of factors of the external and internal environment on the state of human capital by type of economic activity**

**DISCUSSION**

In our opinion, the management of human capital of types of economic activity in Russia has a number of distinctive features from individual organizations that do not have common requirements for various categories of workers. First of all, these distinctive properties cover the sphere of search and adaptation of workers, as well as the sphere of non-material incentives. We believe that for an employee who has the ability to move within the scope of the type of economic activity, everyday working conditions play a lesser role in comparison with the conditions of personal development and job growth.

That is, returning to the Ishikawa diagram, we can conclude that the state of the creative base or competency-based tools will have a stronger influence on the employee's desire to stay in the organization than, for example, the state of the workplace or the presence of a varied menu in the cafeteria. Therefore, when assessing the influence of factors of the external and internal environment, it is necessary to take into account the qualitative parameters of working conditions (see, for example, Guion, R. M., 1991).

In particular, a survey of employees of several organizations from various types of economic activities, conducted by the author in January-February 2020, showed that the majority of intellectual workers pay more attention to the possibilities of obtaining a scientific or innovation-filled result and are ready to put up with insufficient the comfort of workplaces (Figure 13). This situation is typical, as a rule, for enthusiastic people with a high level of research ambition (James K. Harter et al., 2020).

For example, about 45% of employees indicated the state of the research base as the main reason for retaining a job in the current organization, and slightly more than 33% - the freedom to search for tasks. That is, at the level of labor migration in the scale of the type of economic activity, the factors of individual development in the professional direction are decisive for more than 78% of the respondents. At the same time, the living conditions of work, such as the state of the workplace and the menu of the canteen were identified by 21.6% of the respondents. These results indicate that overqualified people are interested in more fully disclosing their potential (Berrin Erdogan et al., 2020).



**Figure 4: Factors of motivation of workers of intellectual labor to continue working in this organization**

\*Состояние творческой базы- State of the creative base; Состояние рабочего места- Workplace condition  
Свобода постановки задач- Freedom of setting tasks; Меню столовой- Dining room menu

Source: built by the author based on the results of his own surveys.

## CONCLUSION

Thus, human capital is an important factor in increasing labor efficiency in the scale of the type of economic activity. At the same time, human capital management must be carried out on the basis of the impact not only on the internal environment of organizations belonging to the type of economic activity, but also on the external environment of the type of activity, ensuring the inflow of new personnel and the possibility of personnel development, regardless of the specific place of work.

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