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## Encouraging Employees to Increase the Labor Intellectualization Level as a Factor of Evolution of the Intellectual Capital

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**Abstract:**

*Rapid changes in the turbulent environment cause the emergence of a new paradigm for modern enterprise operation – new rules, principles and methods of management, and popularize the problems of labor intellectualization, which can be primarily solved on the basis of the development of individual intellectual capital. In everyday life, this means transformation of an "industrial enterprise" into an "intelligent enterprise", the development of which is based on information, knowledge and creativity of employees.*

*Goal of the article is the analysis of the prospects of encouraging employees to increase the labor intellectualization level as a factor of evolution of the intellectual capital at domestic enterprises.*

*Following the results of the study, the conclusion is drawn that the development of the individual intellectual capital at an enterprise is based on the simultaneous increase in the number of working days (during the year) intended for training and improving the employees' skills in the economic practice of domestic economic entities and determining the place and sources of training for employees who are most capable of developing their "capital of competences". At the same time, the main vector for domestic enterprises development under the new management paradigm is based on the development of individual intellectual capital, the main aspects of formation of which should be borrowed from the experience of European countries.*

**Keywords:** *intellectual capital, individual intellectual capital, intellectual enterprise, knowledge capital, capital of competences, creativity.*

**JEL Classification:** *M50, M53.*

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## 1. Introduction

Drucker (1909-2005) was one of the scientists who first wrote about "knowledge employees" for the first time in 1963, drawing attention to the increasing role of knowledge and of the individual intellectual capital formed on its basis in the enterprise development. Nonaka (2011) noted in the successful development of Japanese firms the importance of "... *non-formalized knowledge that secures solutions to various tasks... This knowledge allows for the perception of the organization not only as a machine for analyzing information but rather as a living organism ... understanding what an enterprise exists for. What direction it develops in, what world this firm seek to function in and how that world is arranged is more important than the analysis of information*".

Brennan (2000), notes that "*a spirit of self-development reigns in an intelligent enterprise, which shapes a space for self-education and improvement of employees, and they are treated as individuals who influence the economic activity*". Scientific researches reveal that a 10% increase in the level of education secures an 8.6% increase in labor productivity, while a similar increase in share capital amounts only to 3-4% of productivity growth. Therefore, the modern world observes the positive dynamics of employment in the field of "*intellectual work*" – in particular, this figure in the USA is 85% of the total employment growth, in Britain 89%, and in Japan 90% (Chaffey, 2016). In this perspective, the most important task for an "*intelligent enterprise*" is to secure the ability of its employees to constantly self-educate – for the development of knowledge capital, and self-improve – to form the capital of competences (Pontoh, 2017).

It is important to note that the development of the "*intelligent enterprise*" is based on the innovation model, the practicality of its functioning being described by the rapid aging of the "*knowledge capital*" of an employee formed on the basis of the high level of education obtained, due to fluency in foreign languages, awareness in information technologies and a high level of self-organization ability, which in turn requires the organization of regular self-education and continuous improvement of professional level – personal growth (Chen, 2014; Guskova *et al.*, 2016).

Roos paid attention to the need for constant self-education in their papers: "*... in a world where the search for intangible forms of competition is ongoing, where all decisions are related to knowledge and education, training should be carried out throughout the entire professional life – education is not only theory and knowledge, but also emotional and spiritual development... If you want to find and get the best employees, you must provide them with training opportunities*" (Roos, 2012). Proceeding from the above, the author come to understanding that the important role in the "*intelligent enterprise*" is played by workers – holders and owners of individual intellectual capital, whose ability to search for new knowledge and develop competences is the foundation the creative abilities of employees are

formed on, the corresponding environment develops, which serves as a driver in ensuring the long-term development of economic entities.

However, it must be noted that the development of individual intellectual capital required not just to ensure the formation of a certain "*knowledge capital*" and "*capital of competences*", but also to minimize losses that may occur at a person release.

## **2. Methodology**

The goal of this study is the analysis of the experience of European countries for modeling the development of individual intellectual capital at domestic enterprises. The paper uses the method of comparative analysis of the experience of various European countries regarding increasing the intellectual level of employees at enterprises, as well as encouraging them to increase the labor intellectualization level.

## **3. Results**

The experience of European countries, where the number of working days allocated for education and training ranges between 1 and 12 days, is interesting for modeling the development of individual intellectual capital at domestic enterprises—in particular, in almost half of enterprises (50%) this figure is from 1 up to 6 days, in a third of enterprises (33%) it exceeds 7 days (Claver-Cortés, 2015).

At the same time, it must be noted that in a number of highly developed countries, the time spent on education and training of the enterprise personnel is much higher than the average (11%), including in Great Britain with 21 working days per employee per year, in Portugal with more than 20 working days per employee per year, in Italy with more than 19 working days per employee per year, in Ireland with more than 14 working days per employee per year, in Luxembourg with almost 12 working days per employee per year. The lowest values of this figure are noted in Finland – almost 4 working days per employee per year, in Denmark and Germany – almost 6 working days per employee per year (Ford and Gioia, 2015).

Taking into consideration the share of enterprises that allocate 1 to 6 working days for the development of the "*knowledge capital*" and "*capital of competences*" of their employees, their value significantly exceeds the average (50%) in the above examples and several other countries. The share of such enterprises in Finland was 76%, in Ireland and France 66%, in Holland 65%, in Germany 63%, in Sweden - 60%, in Austria 59%, in Denmark and Belgium 53%, in Luxembourg 52%. At the same time, similar figure for countries that today record deterioration in macroeconomic development is significantly below average. For example, in Portugal it is 33%, in Italy 32%, in Spain 28% and in Greece 25% (Davenport, 2013; Denisova *et al.*, 2017).

It is quite logical that when evaluating the share of enterprises that allocated more than 7 working days to develop the *"knowledge capital"* and *"capital of competences"* of their employees, in some countries their value exceeds the average (50%), in Italy is 55%. At the same time, this figure remains below average in some countries. For example, in Spain is (42%), in Greece (41%), in Great Britain (38%), in Holland (21%), in France (19%), in Finland (12%). Analyzing further trends, the authors understand why a number of countries find themselves in a crisis today (Portugal, Spain, Greece, Italy) despite the supposedly good values of indicators compared even with stable economies (France, Finland, Germany). These countries are described by high negative results, including the share of enterprises, the leaders of which could not answer the above questions as in Spain (26%), in Greece (22%), in Portugal (21%) as well as the share of enterprises that do not practice the introduction of *"training and education days"* as in Portugal (15%), in Greece (11%), in Spain (4%) (Hall, 2012).

Besides, the authors believe that significant differences in creating the conditions for the development of the *"knowledge capital"* and *"capital of competences"* of employees has a destructive effect on the deterioration of the economic situation in these countries. For example, the lowest share of enterprises that implemented *"education and training days"* in their activities was in Greece (66%), Portugal (65%), Spain (70%) with an average value of 85%, whereas high share was recorded in Ireland 92%, where only 1% of enterprises did not practice these development vectors. At the same time, it must be noted that similar indicators were recorded in Germany 91% and 1% respectively, in Sweden 85% and 1% respectively, in France 55% and 5% respectively, in Finland 82% and 3% respectively, in Italy 87% and 9% respectively (Housel, 2015).

It is important to note that most of the enterprises that do not practice the introduction of *"education and training days"* are the ones that do not export their products. At the same time, all export-oriented enterprises without exception encourage their employees to develop *"knowledge capital"* and *"capital of competences"*, securing an increase in the labor intellectualization level on this basis (Hudson, 2013; Mirgorodskaya *et al.*, 2017).

Attention is drawn to the fact that all enterprises that allocated 7 or more working days for *"education and training"* of their employees were exclusively *"young"* companies in the market and were engaged in exports; the share of exports in total sales was 50% and higher. At the same time, enterprises that allocated 1 to 6 working days for *"education and training"* of their employees were not engaged in foreign economic activities, or the share of exports in total sales was below 50% (Lim, 2014).

#### 4. Discussion

Based on the above findings, it can be argued that it is very relevant for domestic enterprises to solve the problem of developing the "*knowledge capital*" and "*capital of competences*" of their employees, because Russian economic agents will not be able to ensure a sufficient level of competitiveness in the shortest possible time without a constructive solution to this problem. Taking this into account, the authors propose to define two stages of implementation of the program for increasing the individual intellectual capital at domestic enterprises. The first is to introduce time spending on "*training and education*" of up to 6 working days per year per employee into the economic practice (within the working time); the second is the gradual increase in the working time spent on the development of the "*knowledge capital*" and "*capital of competences*" of its employees (more than 12 days per year per employee).

Attention is drawn to statistical figures that describe the efficiency of enterprises arranging training and providing motivation for the personnel at enterprises. Analysis of statistical information shows that the dominant in ensuring efficiency is described by training that was carried out directly at the enterprise (more than 50%) or based on private educational institutions (almost 20%). Training of personnel based on state institutions (12%) was the least efficient, and training in institutions such as Chambers of commerce and trade societies was somewhat better (15%) (Gereffi, 2012). The above data indicate that the level of trust in the quality of educational services within the European space is also insufficient.

It must be noted that the situation in Russia is not an exception. However, its solution lies in establishing partnerships between the two sectors, research educational and business, because Russian private higher education institutions are not similar to European institutions, the competitiveness and prestige of which have been formed over many decades. Despite the insufficiently high level of education quality in most private educational institutions, it is worth noting that prompt resolution of interaction problems between the educational and business sectors will open opportunities for their strategic development.

Depending on personal capabilities, acquisition of new knowledge and competences for personnel at the enterprise is possible within:

- studying for higher education, followed by a system of life-long self-education;
- training based on the study and analysis of competitors' experience: monitoring, copying (tracing), benchmarking, sponsoring;
- obtaining knowledge from the environment: consulting firms, business schools, media, conferences, symposia, round tables;
- education through the exchange of information: interviews, dialogues, discussions, other ways of communication;
- self-education based on experience (Hall, 2013).

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Because the increasing influence of the *"knowledge capital"* not only on the formation of a high level of professional and intellectual competence but also on increasing the level of communicative competence of employees due to better knowledge of information technologies has recently become more and more noticeable, a conclusion can be made about an indispensable increase in the level of creative competence of employees in the domestic business environment.

Scientific studies confirm that the level of access to information, its analysis and economic assessment play an important role in the formation of the creative climate at the enterprise. It must be noted that Schumpeter, Taylor and Drucker drew attention to the importance of creativity in business processes in their papers, arguing that innovation was based on creativity and introducing the concept of *"combinations of new changes"*, *"creative entrepreneur"*, *"creative organization"* (Davenport, 2009). Creativity fully fits into the dynamism of developing the intellectual capital at the enterprise at the present stage of the society development, being an important qualitative property of individual intellectual capital.

The increase in the level of creative competence of employees, which is established due to the human's high cognitive elasticity and propensity for outside-the-box thinking (in other words, "outside-the-box problem solving"), is the most important factor in providing spasmodic, qualitatively new, progressive changes around domestic enterprise operation in modern realities. An employee's creativity is ensured by providing autonomy in performance of professional duties, creating an atmosphere of support for creativity, which results in proposals for creative problem solving, expansion of inventive and rationalizing work at the enterprise, which secures strengthening of the *"enterprise intellectual property"* component and changes mentality in general (Stewart, 2007; Vetrenko and Yaburova, 2015).

Given that the education level has the greatest impact on the development of *"creative competences"*, the authors emphasize the need to reform the methodology for training young professionals in Russia, especially changes in the training system, which must be re-oriented from memorizing and knowledge reproduction to innovation, ingenuity and constructiveness, i.e. transformation of *"knowledge baggage"* into *"knowledge capital"*. A catalyst in the development of *"creative competences"* today is book reading, which ensures increase in the creativity level. Findings of empirical studies prove the socioeconomic feasibility of increasing the reading intensity indicator. For example, more than 80% of the Czech population read at least one book a year, and almost 70% in France. Against this background, the share of *"real readers"* is quite high – i.e. those who read more than 5-6 books a year, including almost half the population in the Czech Republic and more than a third of the population in France (Leontiev, 2002; Voronkova, 2013; Voronkova, 2015a; Voronkova, 2013b; Sazhin and Saraikin, 2016).

The given data give grounds to assume positive changes in building up the creative potential of European countries and to identify problematic issues in creating

favorable conditions for encouraging the development of creative competences in Russia at the same time.

Supplementing the human "*competence capital*" with creativity now seems quite plausible in the Russian realities. At the same time, it must be noted that all employees of the enterprise without exception should have the creative potential, and the managerial body of the enterprise should encourage the personnel to increase the creativity level, which was confirmed by Feiwel (2007) in his study where he argued that in modern enterprises "*... managers treat people as a potential source of income and work to identify this potential. Expenditure on education is interpreted as investment that increases its price*".

According to scientific studies, development of creative competence of a person is most efficiently provided on the self-motivation basis, which is the effect of one's own "*knowledge capital*", level of intellectual and communicative competence that encourages the person to learn new interests, form proactive attitude and constructive lifestyle (Fitz-Enz, 2006; Medvedeva *et al.*, 2015).

Based on the above, it must be noted that the constructive development of domestic economic entities can be secured in two ways, the first being to form the social responsibility of business, i.e. investing business funds in financing educational and cultural events, creating grant programs for internships, supporting the activities of non-governmental organizations; the second being to invest in encouraging employees to develop "*creative competences*" that can be implemented in various forms of monetary (bonuses, participation in profits, monetary rewards, etc.) or non-monetary (moral) incentives for creative ideas, novel suggestions or new options for solving problems.

As such, it would be advisable for domestic economic entities to introduce plans for employment, education and mobility of employees to develop individual intellectual capital and improve the motivation of employees to build up the "*knowledge capital*" and "*capital of competences*", which, based on the above reasoning, will allow to modernize labor planning processes on the enterprise, given the world development trends. For instance, education plans will secure the improvement of the enterprise personnel qualification; mobility plans will assess the professional career growth for each employee, which also requires novelization of methods to encourage the improvement of the level of personnel intellectual, creative and communicative competences. It must be noted that increasing the level of communicative competence of employees at domestic enterprises will ensure the development of leadership qualities, adaptation and ability of joint work, which are an indispensable element in the modernization of problem solving in the new economic paradigm.

The dynamic environment a modern enterprise operates in requires constant novelization of the vectors for the individual intellectual capital development, which

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can be regarded as an "engine" providing balanced environmental, economic and innovation-driven growth of economic entities. The innovation model of the enterprise requires a high level of development of creative competences in employees, because only such a specialist will be able to create innovative products and increase competitiveness of economic entities. Given this, modern enterprises are trying to encourage their employees to show creativity in performing their functional duties by using a variety of the known technologies and incentive models. Treating creativity as a tool of ensuring competitive advantages, is important to establish creative climate within the enterprise and favorable environment for the economic entity to function in. At the same time, the development of such a proactive environment requires the leaders and owners of domestic enterprises to recognize the importance of investing in the development of local communities and intersectoral partnership, in establishing links with local governments and the third sector, public organizations, etc.

## 5. Conclusion

It is advisable to proceed from two trends in the economic activity of domestic *"intelligent enterprises"*: first, ensuring the employees' development and their labor intellectualization; second, encouraging employees to conduct intellectual activities, because employees who focus on systemic training acquire new features – in particular, creativity, intelligence and communication. The first vector of the individual intellectual capital development at the enterprise is based on increasing the number of working days intended for training and advanced training of employees (during the year) in the economic practice of domestic economic entities. The second assumes definition of the location and sources of training for employees most capable of developing their *"capital of competences"*.

Summarizing the above, it must be noted that the main vector of domestic enterprise development under the new management paradigm is obviously based on the development of individual intellectual capital, the formation of which being largely determined by the social environment the economic entity operates in. In these conditions, the main task of the executives and management of the enterprise is to establish an intersectoral partnership represented by the formation of stable interactive relationships between the fields of science and education, business and public organizations with the view to developing social intellectual capital, the study of which can become a prospect for further study.

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