

Influence of Structural and Digital Transformations on the Regional Human Capital Development and the Growth of Personal Welfare

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Abstract—The article reveals the peculiarities of human capital development in the region under the influence of the economy digitalization processes. The processes occurring in all structures and segments of the regional market and influencing the development of the regional human capital can be divided into two parts — these are the consequences and challenges of the digitalization. The structural elements of the personal welfare strategy in the digital economy are shown.

Keywords—*economy digitalization; development of regional human capital; strategy for personal welfare growth; labour market*

I. INTRODUCTION

Under current conditions, the task consisting in prompt and qualitative formation and development of the information society is being addressed with the purpose of improving the quality of life of the population and ensuring the competitiveness of the national economy in the world community. The digitalization universally entails changes in the great number of key basic technologies in all spheres of life. New business processes (information processes, communication processes, educational processes, artificial intelligence-related processes, etc.) are being introduced in the Russian economy, the existing business processes are being diversified and the productive forces of the national economy are being transformed, making it necessary to develop social and economic relations in order to improve the quality of life of the population and ensure the competitiveness of the national economy in the global community.

II. STRATEGY FOR TRANSFORMATION OF HUMAN CAPITAL AND GROWTH OF PERSONAL WELFARE UNDER THE DIGITALIZATION OF THE REGIONAL ECONOMY

The efficiency of any economy (a nation's, a region's or the world economy) depends not only on the effectiveness of market or government regulation, but also on how effectively the individuals build their personal welfare strategies.

From an economic perspective, a human being has always been considered as an individual striving for increase of personal welfare. Many scientists mention the dual nature of a human being: he is both a producer, and a consumer, which provides a basis for his personal welfare. When considering a human being as a producer, he may be treated as one of the factors of production (labor force), who makes products. At the same time, the individual can consume goods, whereas, as a result of consuming these goods, he gains and forms his capabilities, and, in the process of purposeful activities, - exercises them.

Consequently, when a person's capabilities are being developed, their consumption is met by increase of quantity and quality of the goods. The growth in the quality of labor, in its turn, promotes the increase of production. This pattern is revealed through the growth of the people's personal welfare.

V.D. Andrianov defines welfare as a subjective assessment by citizens of satisfaction of their needs in the areas of health care, resources, political liberties and cultural values. [2]

M.S. Natarov defines personal welfare as a social value reflecting the balance between economic and social interests.

This balance is built on the responsibility and the norms, which are inherent in all members of the institutional community. [7]

A.A. Poduzov and D.K. Kukushkin view welfare from broad and narrow perspectives: “The welfare in a broad sense includes both fundamental elements of human life activities (for example, health condition, presence and nature of work, consumption of food stuffs and other material goods and services), and the elements of psychological nature (family relationships, self-esteem, participation in social life, etc.). In economic science and practice, welfare in a narrow sense is limited by the types of life activities, which are inextricably linked to the total amount of the consumer goods and services, which are available to a person.” [10]

According to A.N. Klimonova’s definition, “the personal welfare strategy is a way to reach the maximum possible level of satisfaction of the population’s needs, when all kinds of economic resources are used effectively and the justice, concerning the principles of which various views are held, is observed in the society.” [3]

There is no universally accepted definition of strategy in theoretical works on strategic management. Design school, planning school, positioning school, entrepreneurial school, as well as cognitive school, learning school, power school, culture school, environment school and configuration school are known. [6] Each school defines various sides of the concept of strategy. However, the approaches applied in the schools to defining the subject of the strategic choice can be regarded as organizational or individualistic ones. An individualistic approach focuses much more attention on personal characteristics of a subject of strategic choice of the substance of economic activities as a source of personal welfare growth. Moreover, some researchers tend to consider competitive abilities as an innate characteristic trait of human potential requiring further development, while others perceive them as a peculiarity of individual core competencies, that is to say, as an ability to ensure a process of choosing, to implement a strategy for interpersonal communication and growth of personal welfare, which has been exceptionally acquired in the process of the competitive life activities. “In its most general sense, personal welfare represents a situation, in which a person is provided with indispensable material and spiritual benefits.” [4] The latter, as part of the individualistic approach, is formed under the influence of environmental factors and the subjective perceptions of a single individual of strategic choice concerning his personally affordable limit of diversification of the substance of his entrepreneurial life activities. Consequently, a person’s competitive abilities must be developed for satisfying the objective needs of the living, whereas their interactions provide for the growth of his personal welfare. The actions of an individual, who is objectively both a producer, and a consumer, related to formation of his own personal welfare define the nature of economic relations, which are established in the process of production, distribution, exchange and consumption of the goods of life.

There are objectively, for one part, an individual’s capabilities, which form a work force and human capital, and, for the other part, his needs in general, as a prefigured need for the goods of any kind. As a result of interactions of the aforesaid elements, the event context of labor process is revealed, in which the goods are being created and an individual process of using the goods in order to satisfy a person’s needs is being implemented, which is the manifestation of patterns of realization of the individual’s capabilities forming his work force and human capital, and, alternatively, to satisfy the need for the goods to reproduce his life activities. The first factor of the event context, in which the objective patterns are manifested, is the factor of self-development of labour processes and the process of satisfaction of an individual’s needs. The second factor of the event context is the factor of regulation of social and economic interactions, which is required for the effective use of the self-development factors. The forms of manifestation of a set of economic relations reflect an action in the event context of economic laws: the law of increasing labour productivity, the law of rising necessities and the law of recovery of workforce inputs and human capital. The operation and use of these laws are subject to the expediency of implementation of the process of personal welfare growth.

There is an obvious link between the development of an individual’s capabilities and the growth of his necessities and personal welfare. As a result of the reproduction process for development of capabilities, they are transformed into the corresponding actions and interactions, which provide for labor functioning. The highly-developed capabilities provide for qualitative and productive performance of work and its competitive result. In the event context, an individual having such capabilities has competitive advantages in the labor market. High comparative competitiveness of an individual, given other favorable conditions of his work, is a guarantee for him to receive a comparatively greater income for the results of his efforts. With this aim in view, an individual makes practical decisions concerning his strategic behavior. The strategy as a way to achieve the growth of personal welfare in the process of the individual’s life activities emerges at first in the form of an ideal sensible plan for personal welfare growth, and then it requires transformation of competitive activities, the consequences of practical implementation of which improve the situation with one’s own personal welfare. The choice of strategy is necessitated by the need for setting and delivering the objectives of the life activities for personal welfare growth in accordance with the need for realization of an individual human potential at macro, meso- and micro levels. That is, life strategy is a principled (implemented in various life circumstances) capability of a personality to combine its individuality and the transforming living conditions, to reproduce and develop this strategy.

If social and economic interactions do not have positive feedback due to violation of the principle of the qualitative conformity between the interacting elements therein, then the factors of the strategic self-development do not provide for the growth of personal welfare.

Therefore, the ability to reach high indicators of one's work, to diversify them and to use effectively the internal capacities and external opportunities, while promoting the development of individual competencies in the system of market relations for growth of personal welfare, is important for an individual dealing with any profile of economic activities. If the competitiveness of an individual in the labour market is high, he tends to retain this level under the dynamics of the external environment in order to gain his profit by receiving a greater income. The strategy for the growth of personal welfare is a way of a human being's adaptive living in various spheres of his economic life. That is why the manifestation form of pattern of development of an individual's capabilities and needs in the process of his working activities and patterns of growth of personal welfare in general as a result of this process is the choice and realization of individual active strategic behavior.

The concepts of the objective process aimed at realization of an individual's capabilities and satisfaction of the needs for the goods to reproduce his life activities under the present conditions of managing reveal themselves in the context of digitalization of social and economic life, which is the key factor for changing the social and economic order of almost all global economic systems. We share the position of N. A. Serebryakova and I.V. Avdeev that the digital economy "represents a new technological order, where the fundamental importance is given to the relations concerning production, processing, storage, transfer and use of the increasing data volume in the context of the total application of digital technologies." [1]

III. DEVELOPMENT OF THE REGIONAL HUMAN CAPITAL UNDER THE INFLUENCE OF STRUCTURAL AND DIGITAL TRANSFORMATIONS

V.V. Putin mentioned the commencement of a wide-ranging system program for development of the economy of the new technological generation. [5] [11] [14] It is important to note that the present stage of the revolution in science and technology, as well as the emergence of digitalization, demonstrates an entirely different scale and speed of changes taking place in the economy, as compared to all previous ones. In the context of formation of digital economy, the individuals globally encounter the difficulties in choosing the strategy for diversification of the substance of working activities to ensure the process of personal welfare growth based on keeping the competitive advantages attuned to the conditions of the digitalization of working activities. K. Holland [17] states that only 10-20% of the university graduates worldwide are ready for the competitive working activities (the rest of the graduates lack either the professional knowledge and skills for generating income or the intrinsic motivation for diversification thereof, or social and communication competencies). Therefore, "the explanations of social, political or economic phenomena are relevant only when they are based on an individual's convictions, attitudes and decisions." [4]. For that matter, the subject of the influence of the digitalization on the structural component of the labour market, as well as system for professional personnel training, is taking the center stage.

This circumstance determines the role of the formation and implementation of an appropriate diversified strategy for the personal welfare growth, which in many cases serves as a source of formation of individual competitive advantages. The content of the personal welfare strategy is a set of concepts concerning the criteria and principles of strategizing of the interacting individuals with the purpose of increasing their material well-being.

The practical reduction in current employment of the population in the work due to automation and mechanization is not in itself novel. Over the past decades a significant reduction in the number of people employed in the industrial sector of production is also taking place. The distinctive feature of the digitalization conditions (and the processes related thereto) is the wide-spread diffusion of the information and communication technologies into all spheres of social life and economic activities, which entails a tremendous transformation of the substance of the working activities for the population. [8] [9] [12] [13] [16] [19] One of specific features of this process is that earlier the substitution of the current workplaces, which had disappeared as a consequence of scientific and technological progress, with new ones in various spheres of production was offset by the possibility of adaptation as employees in other kinds of production activities. The previous reduction in the number of workplaces in the industrial sector of economy was offset by their increase in a different sphere, such as the services sector. However, in modern conditions the universal decrease in the number of workplaces is observed also in this sector of economy. This used to be called "the becoming of a post-industrial society." In the present conditions, the digitalization is not local, but global in its nature of the transformation of the substance of the labor activities. The introduction of digital technologies leads to changes in all professional competencies in almost every sphere of professional activities. [15] [18]

We are therefore speaking of the process of conglomerate diversification of key competencies in the labor market. The development and the enhancement of neural networks, as well as the artificial intelligence, make it possible to release labor force almost fully and to renounce the use of an individual's active working competencies. Many production tasks are solved by actions taken by an operator or a technician, who perform maintenance and supervision of the complete production and technological process. [6] [7] [8] One of the examples of such influence in the Russian Federation can be the development of various electronic services and resources, such as car services (Yandex, Maxim and others), which now have in fact already led to the loss of demand for, for example, the profession of taxi dispatcher in most of the big cities. The professions of bookshop worker and librarian, as well as almost all activities related to the printed publications, are being diversified. The need arises to realize new professions, such as community manager, UX-designer, 3D-artist, Java-developer and such like things. The structural and digital transformations provide for the changes in the regional economy in general, due to the digitalization there is a need for fundamental changes in the regional human capital for it to conform to the developed digital

infrastructure. The speed and the scale of all changes are such that those who left, more often than not, face no alternative but to completely change their qualification and master the competencies, which are qualitatively new for an individual. The solutions of the economic operators rely increasingly not on calculations (even if there's an opportunity to perform them), but on heuristics - the set of unconscious reactions, which help to make a prompt decision on diversification of the substance of the current activities, often without referring to logic and strategic rationality. For that matter, the questions arise as to how the individuals' thinking will change and, consequently, the peculiarities of adoption of strategic decisions and human behavior in the digital economy?

In the present situation, the social and economic problems are revealing themselves, caused by (under the conditions of choosing diversified strategies for personal welfare growth) substantial deviations from sustainable behavior model (firstly, the irrational risky investments in uncompetitive assets and, as a result, mass problems with emotional and physical health), which deteriorate core competencies of both single individuals, and the regional economic system as whole.

In the age of the development of the digital economy, the problem of its influence on all areas of individual living gains relevance. According to V.V. Putin "the digital economy is not a separate industry, but, in fact, is the way of life of the entire population." [14]

The practical knowledge on the influence of "the irrational" behavior at the micro level, which is being gradually accumulated, will most likely lead to revision of some theoretical stances on the forms of manifestation of the objective patterns of realization of an individual's capabilities, which form his work force and human capital, and satisfaction of the needs for the goods to reproduce his life activities; and the forms of manifestation of the patterns of the development of an individual's capabilities and needs in the process of his labor activities with the purpose of personal welfare growth as a result of implementation of the process of individual active strategic behavior.

IV. CONCLUSION

In conclusion, it should be noted that the processes initiated by the digitalization in the regional economy and in the society in general cannot be regarded as a negative or a purely positive influence. The digitalization influence processes are complex and all changes occurring presently at the labor market can entirely change structure. The structural and digital transformations have positive impact on the regional market, but also carry negative features and consequences.

The realization of the structural and digital transformations in the regional economic systems will allow for obtaining the following effects: ensuring the human capital growth; stimulation of business activities and development of remote employment, increase in professional mobility; personal welfare growth of the self-employed individuals, who are working remotely in the Internet. In the

context of the economic digitalization, the release of the mainstream working population entails global social consequences. In particular, some irreversible consequences are already taking place in working life now and it is reflected by the reduction of the growing number of workplaces, as well as by the growing requirements towards new professions and qualifications mastered by working individuals.

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