

# Transformation of Human Capital Phenomenon: Making of New Research Paradigm

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**Abstract**—In this article the analysis of the transformation of human capital in terms of the integrity of its functional features was carried out. The specificity of the scientific evaluation of existing market relations in the structure of the study of modern social development was revealed and substantiated. The laws of the development of productive forces as the core of human capital were considered depending on the changed characteristics of social subject. Performed analysis proved the dependence of the degree of efficiency of human capital reproduction on the development of innovative entrepreneurial activity of specialists. During studying the functional determinacy of human capital, particular attention was given to changes in the ratio of basic and developed human capital. It was shown that the existential transformations of workers which can be studied within the framework of interdisciplinary approach significantly change the motivational component of human capital. Performed analysis allowed identifying main risk groups for the processes of human capital reproduction in the regions. Required including media technologies in human capital was proved; their role in the process of labor resources reproduction was determined in the terms of emergence of new forms of knowledge and the analysis of the immersion of a social subject in teasers and book trailers. On the basis of this study, it is proposed, for the economic study of human capital as an aggregate worker, to take into account growing trends in the autonomy of individual participants of productive forces. Differentiation of spheres was shown that simultaneously forms labor potential and are the arena of its actualization.

**Keywords**—*human capital, reproduction, investment, labor potential, subject.*

## I. INTRODUCTION

In the context of globalization and increased competitive confrontation at all levels of social relations, the role of the economic component of the social structure in the status of the actual basis for maintaining the survivability and safety of existing specific types of society becomes actual. From the point of view of economic, social and human sciences, such assumption seems to be conventional: it is the economy that is positioned as a causal-determining basis for social development in various forms of scientific analysis of society. Meanwhile, a scientific analysis of the processes taking place in society today often encounters difficulties which are not always possible to overcome within the framework of existing paradigm. One of the reasons for existing gaps between scientific theory and the need to solve specific social problems is the transformation of several elements of economic factor.

Thus, in the information society, in the characteristics of productive forces as a part of production process labor potential is already not reduced to resources, in labor relations it appears also as a profitability factor, a special form of capital. However, the relevance of the study of human capital in view of modern scientific theory is due not only to the required solving specific economic problems. Even in pure economic analysis, human capital being an object of study reveals the overall state of society. Thus, in conditions of increasing financial dependence of social spheres and certain countries from each other, the analysis of the state of human capital is impossible without defining financial investments and costs in its development, reproduction and activities of workers. However, already the stage of determining the value of human capital is influenced by the problems in education, health care, information communications, and mobility. The study of mentioned social problems is currently characterized by an increasing imbalance of qualitative and quantitative parameters: the immeasurability of former ones, and the formal absence of touch with reality of the latter ones. As a result, it seems relevant to develop a new paradigm for the study of human capital, with the methodology and theoretical foundations coming from the dynamism and alternative development of the modern participant of labor relations.

## II. LITERATURE REVIEW

Review of the available literature on the problems of development, functioning and the processes of human capital reproduction also speaks for the relevance of developing theoretical foundations for new paradigmatic approach. It should be noted that the works of domestic scientists contain mainly a traditional research of the separate components of human capital, statistical review of the dynamic inclusion of labor resources in economic relations. Particular attention was paid to identifying the dependencies between the state of social policy and actual processes of the reproduction of aggregate worker in economic sphere. The general ground for all areas of analysis is the rejection of the linearity of Marx's method and the tendency to consider human capital through alternative ways of its development. In this regard, in terms of the mentioned aspect of the problem, the work where attempts were made to create a fundamentally new methodological base for the analysis of human capital is of particular interest for Western economic and social scientific thought [1]. In particular, with regard to the development of a new paradigm of theoretical research, it is pointed out that we should adjust

the principle of the unity of the historical and the logical due to the fact sparse data and dynamically unfolding processes make the study of separate parameters of human capital ineffective. An interesting experience is the construction of a “timeline of relevant counterfactual nodes” [1]. An indirect confirmation of required revising the basis of “human capital” phenomenon is shifting the emphasis in relation to its main components: from traditional statistical reviews of the state of education, mobility, health care to the dynamic changes of their contradictory development. Considering the mobility nature of human capital today is currently inseparable from migration processes. In contrast to the political science data in the study of the patterns of changes in human capital due to migration flows, their small share in negative social consequences has been proved [2]. In this regard, the dependence of regional shocks on the production form of human capital is proved; its analysis allows forecasting decreased investments in education [3]. In addition, there is notable fact about the lack of direct relationship between the expansion of benefits in social sphere and the growth of human capital quality. In particular, free education in society does not always determine the positive state of labor resources: at advanced stages of development, with high parental human capital, the availability of free education displaces private educational investment, stimulates birth rate and can prevent from the growth of economic effects [4]. In the specifics of the processes of regional human capital reproduction, special attention is currently paid to the general problems of digitalization of social relations when media opportunities have a great influence on the processes of the natural development of the labor potential of society [5].

### III. RESEARCH METHODOLOGY

Main methodological basis of this study is structural genetic approach; it was chosen due to the need for interdisciplinary making of a theoretical model for “human capital” phenomenon which is designed to clarify the current significance of the corresponding category in the structure of economic and social knowledge. The applied principle of the unity of the historical and the logical allows us to trace the change in the structural components of studied object in historical dynamics while maintaining its stable essential features. Logical research on the features of regional human capital reproduction requires the structure of economic, social, educational, cultural, productive aspects using general abstract-logical approach with a view to the effectiveness of strategic planning for the development of the productive factor in economic sphere.

Specific scientific level of this research methodology is characterized as analytical-synthetic one based on the general logic of the methods used for analysis, analogy, modeling. The grounds for highlighting the basic structural components of “human capital” phenomenon were found using both analysis and synthesis; these components are necessary for analyzing the specifics of its potential reproduction in modern conditions. Key feature of this method is the introduction of traditional methods of scientific analysis into the field of strategic planning. In particular, elements of a SWOT analysis were used to concretize the positive trends in the development of human capital and to demarcate the main risks of its social activity.

Results obtained during the study are focused on getting the actual evaluation of existing market relations in modern social development and speak for the effectiveness of

interdisciplinary synergetic approach in the study of the selected object. Study findings are based on a human capital management system that should determine the work of self-organization mechanisms that are potentially included in human capital as the main productive force of society [1].

### IV. RESULTS

#### A. *Transformation of the existential essential nature of human capital*

The interdisciplinary analysis of “human capital” phenomenon allows one to generalize its characteristics in the property of existentiality, since initially the profitability potential is contained in a certain system of knowledge, skills, abilities, motivations, the economic value of which is integrated with the personality of the participant and cannot be separated from it. However, the existential nature of the human component of productive force is constantly changing and is a moving contradiction between its own form and its own content. Skills and knowledge acquired and used by the subject in specific historical conditions are directly dependent on the specifics of the era and can radically change the very structure of human capital. Motivational component which is determined by the mechanisms for obtaining knowledge can affect the effectiveness of human capital activity in economic relations. These trends are especially obvious in the processes of human capital reproduction in the regions. The following types of transformation of the existential characteristics of the subject of productive forces can be identified as fundamentally new trends in the modern nature of human capital development.

##### 1) *fuzzy academic knowledge during obtaining education due to the groundlessness of modern social subject*

In the general logic of changes in a social subject which essential nature in an extremely general philosophical analysis is determined through communication characteristics, the study of human capital today revealed that simple summation of its main components is impossible. Thus, the process of obtaining knowledge, training, motivation today is certainly focused on the uniqueness of the abilities of each participant of human capital, and are, to a greater extent, based on a fundamentally new understanding by a person of his own rationality. General pattern of this generic property of human is the rejection of the undivided rule of rationality. As a result, the effectiveness of professional identification is now determined not by the amount of academic knowledge gained and not by the degree of its development, but by the quality of skills. The latter is not just an acquired habit or ability; it is a productive talent in professional sphere that comes to a light [6]. Speaking about economy in relation to this component of human capital, such change in the orientation of education process in terms of the formation of the human factor of productive forces transforms the interaction between internal and external environment. In particular, SWOT analysis of the processes of human capital reproduction in regions revealed the following. Dialectic of strengths and weaknesses of development seems to be fundamentally different. Strengths include increasing mobility of the subject in changing his sphere of activity depending on the needs of regional economy. Weaknesses are associated with the fundamental change in alienation processes when the traditional (somewhat necessary in the logic of historical laws) alienation of activity from the subject is replaced by the alienation of the subject from activity [7]. Both parts of the internal environment of regional human capital are currently intensely removing the

eternal contradiction between the specifics of regional economy and the economy of country as a whole. Thus, the mobility of changing the sphere of professional activity is, on the one hand, clearly determined since the economic sector is extremely specific. But, on the other hand, the field of offered vacancies is strictly limited due to these reasons what does not correspond to the orientation of specialist's professional training towards universal flexibility in skills. This determines increased outflow of the active part of human capital from regions. On a scale of the human capital of the country, it results in uncontrolled migration which leads to changes in the value of the mobility of productive forces [5]. The external environment of studied object is also changing. Investments in education as investments in regional human capital today are focused on the making of new system of opportunities [8]. The needs of regional economies determine required formation of specialist's professional skill in the unity of knowledge generation and its management processes. Currently, the investment attractiveness of human capital funds in education is determined by the unity of hard and soft skills.

*2) transformation of the ability to reproduce and update knowledge*

Analysis of the characteristics of human capital reproduction in regions shows that at present, production subjects have a completely different way of orientation in the information field of culture which also includes absorption in economic communications. Due to the complexity of production relations at both domestic and foreign markets, the value of professional knowledge is determined by the ability to develop an idea that recombines the most relevant economic problem at a certain moment of development. Consequently, the profitability of the economic development of region to a certain extent depends on the modification by the subject of the content of information received. The main risks of human capital development appear in the broken logic of reverse synthesis. The activity of subjects of productive forces except this procedure is determined by the analysis of problem components what results in uncertain tactical tasks. In the worst case, tactical decisions crowd out strategic goals [9]. The system for control such risks is the reformed educational institution as a whole; its activity is determined by the new paradigm of actively constructed knowledge [10]. Based on fundamental changes in the selection of the content of proposed knowledge with using alternative sources of information, including these in foreign languages, relying on intersubject integration of knowledge, the competency-based approach to training traditionally forms the open experience of the participant of human capital and, at the same time, aims to reveal it hidden experience. The profile of regional economies implies the mandatory possession of active learning strategies by specialists [11]. On the practical level, the effectiveness of group project activity as a new form of obtaining knowledge through the study of interconnection between knowledge and immediate production activity has already been proved. Graduation thesis defense by a future specialist in the economic sphere in the form of an innovative project becomes common for the institutions of higher education.

The quality of human capital is largely determined by intellectual parameters and, therefore, is directly dependent on the processes of reflection. Analysis of the processes of human capital reproduction in regions reveals the presence of new

mechanisms for the formation of reflection skills as a criterion for the ability to reproduce and update knowledge by participants of productive forces. So, for example, the traditional way of enculturation the subject in production relations through reading is replaced by his immersion in teasers and book trailers [12]. Complexity and cost of making and promoting such videos pays off by increasing efficiency of the subject's work with information as a result of the synthesis of verbal and audiovisual elements. Based on this, the latest media technologies should be recognized as an integral part of current human capital. Moreover, this new component grows into all previous traditional characteristics. The study of human capital in region's economy revealed an innovative form of its activity –festival one [12]. Digitalization and automation of many areas of public life turns the subject of productive forces into a regular participant in all kinds of contests, educational programs, social projects, etc. [11]. Activity rate in this area in many ways begins to determine the effectiveness of investing human capital itself and the degree of economy profitability as a whole.

*B. Functional determinacy of the modern process of human capital reproduction*

*1) human capital has a contradiction between consumer and production goals*

Systemic organization of human capital in globalization era significantly differs from traditional static elements. Previous structural analysis of this phenomenon in economic science was based on the conservative behavior of subjects of economic relations that characterized reproduction process as a kind of cycle of human resources. Currently, the innovative nature of the economy leads to increased innovation and creativity associated with productive forces [13]. In the logic of scientific theory development, this state of human capital should be considered as some negation of negation. In the models of the reproduction of this economy phenomenon in modern concepts, the dialectics of the ancient concepts “techne” and “episteme” can be traced where “techne” is knowledge that origins from the rationality of human and differs by the very process of knowledge production: a human is born from another human, while a statue is not born from the statue. Technogenic nature of the productive forces determined by economic science is comes out today namely in “techne” when the conscious factor becomes equivalent to objective laws in the processes of technical evolution. In the fierce competition of a globalized market, this means an increase in the cost of human capital: from physical effort to financial waste and loss. Mega machine of L. Mumford, with the absorption of people through their transformation into elements of technical systems where these elements are equal and interchangeable turned out to be a form of mythologizing the relationship of a person with his own brainchild – technology. Modern reality of economic relations in the processes of human capital reproduction demonstrates, rather, the right point of view of another thinker: technology itself is rather just a useful precipitate of impractical human actions. It is the sustainability of human reproduction that is today turning into a decisive factor in economic growth [3]. It is enough to emphasize that it is at the cross-section of regional economies that the innovative entrepreneurial character of specialists whose activity leads to the profitability of economic relations, clearly comes out [13]. The orientation of the direct participants of human capital to the acquisition of resource rent is giving way to the desire for constant self-

development. Thus, the quantitative characteristics of human capital turn to be secondary, in the system of properties the characteristics of labor itself start to be prevalent. Moreover, the intensity of labor is losing its position in relation to such criteria as mobility and flexibility in reaction to changing market situations.

Human capital realizes its potential both in the sphere of production and in the sphere of consumption. Consumption of human capital remains structured at three basic levels: at the level of activity of the productive forces of society, at the level of the contribution of workers to production activities, and at the level of personal consumption. The latter comes out in the individual competitiveness of human capital what reflects the momentary relationship of supply and demand for capital itself. In reproduction processes at the regional level, this property of human capital should be noted as the basic one, since there is no main contradiction between the needs of employer and the quality of the productive forces. A feature of the regional process of human capital reproduction in this aspect is the aggressive influence of the unequal quality of life of center and periphery [5]. With successful investments in the education of future specialists in accordance with market demands, it is hard for regions to prevent the outflow to higher-wage market segments. Another risk factor is the lag of regional human capital in the terms of special experience accumulating process which is caused not only by opened market vacancies, but also by a large segment of low-skilled manual labor. The situation is complicated by the fact that the asymmetry of markets creates a vicious circle: everything starts with a low level of socio-economic activity of human capital and, in the end, leads to the same results. Low level of human capital is determined by the lack of effective mechanisms for using labor resources. Decreased investment attractiveness, even in conditions of labor redundancy, can lead to adverse economic development of the region [2]. Traditional recruitment system also remains a risk factor. Until now, the market for vacancies and professional growth, as a rule, is focused only on the internal environment of the enterprise itself. A certain way is the development of entrepreneurial activity, and change of orientation in the processes of human capital reproduction, not on the industry, but on the social priorities of regional development

## *2) human capital in differentiation – integration processes*

Human capital development is determined by the general laws of social sphere. In particular, in the analysis of the processes of the reproduction of regional economic entities, the main contradiction of the globalization of all the processes of the cultural life of modern man is clearly visible: leveling of individual features with a simultaneous increase in differentiation within general trends. Conventionally, human capital today remains the attitude of economic entities in the process of formation of each person's labor abilities; on the basis of it should be recognized as the participant of some aggregate worker. It is such an aggregate worker who is able to show his ability to work as capital, that is, value which through economic and production activities leads to surplus value [4]. In economic theory, the accumulated capital in the form of generalized characteristics of the employed population is considered to be actual functioning human capital. However, the current state of human capital is characterized by an intensification of disintegrative trends: from the essential processes of an increase in differentiation of labor to the autonomy of individuals in the structure of

productive forces. In particular, for the management of the processes of human capital reproduction today it is necessary to take into account the special significance of its special part - activities of those entities that are engaged in service sector serving the entities of the productive forces of manufacturing economy sector. Due to the innovative features of human capital studied above, it should be concluded that the service sector itself is gradually expanding through a variety of its own components. So, in a communicative society, education becomes a service and acquires new corresponding properties. The functional of human capital is also changing. For example, the economic result of its development is not only a traditional increase in labor efficiency, or an increase in the profitability of employee or enterprise, but also the formation of a qualitative level of the region's state (up to the image of social attractiveness in improving population stratification). Therefore, the quality of life of a socially comfortable person becomes a criterion for the development of regional human capital along with traditional economic parameters. The emphasis in the characteristics of human capital is confidently shifting from "capital" to "human". In the processes of human capital reproduction, regional economy of should definitely take this circumstance into account, and in planning effective regional development programs, it should consider the state of basic human capital as an integral part of investment in future income.

## V. CONCLUSION

Economic relations are a complex system where profit is one of the parts of structural bonds. In this system, the development of human capital appears as the interaction of participants of productive forces. This development inevitably involves certain costs on the part of subjects, therefore their financial expectations should certainly cover these costs, otherwise the interaction of able-bodied population initially becomes unprofitable. However, changes in human capital as a result of the investment policy of state institutions do not exhaust the completeness of its characteristics [2]. An equally important characteristic is an internal change in the functional potential of social production entities. In the information society, there is an increase in the importance of human capital quality in the structure of production mode in the leading role of productive forces. In modern conditions, not only the static components of "human capital" phenomenon become fundamentally different, but the mechanisms of their generation and functioning are also transformed.

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