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CONCEPTUAL APPROACHES FOR DEFINING HUMAN DEVELOPMENT WITHIN THE THEORY OF HUMAN CAPITAL FORMATION

In the article the basic conceptual approaches to the definition of human development in the theory of human capital in the context of globalization. Analyzed the interpretation of human capital by foreign and domestic scientists and economists. Systematization made approaches to socio-economic substance category of "human capital".

Keywords: human development, globalization, human capital, the UN Development Programme, the investment, the global economy.

Today’s global economy development requires new approaches for elaborating modern methodologies for quality assurance of corporate management, which place human capital to the foreground in opposition to material values. Key development resources are being replaced, and instead of the place with fixed production, available mobile finance and human intellect become the main factor. It is exactly what the new type of global industrial organizations bases on.

Besides, under current conditions, accumulated and employed human capital directly defines economy’s competitive position and possibilities of its modernization. During the crisis, theory of human capital gets further development and deep conceptual meaning; it includes above all individual’s ability to demonstrate social adjustment and correspondence with transformation processes, where personal skills and knowledge are the key factor for economic development.

Given the fact that major imperatives presently defining human society’s development, i.e. globalization, cooperation and humanization, prioritize human personality in the system of factors and objectives of economic growth, since the development essence is oriented towards the human, the understanding that the main fortune of any country is human potential becomes increasingly recognized. It is an axiom that the most important and prominent qualitative shifts in reproductive process of economically leading countries occur not in material field, but in the area related to human’s development and satisfaction of human’s needs.
The idea of human capital roots back to the history of economic mind. One of the first its interpretations was mentioned in “Political arithmetic” by W. Petty, who was the first one to write about labor theory of value [1]. W. Petty was also the first, who applied value approach to person’s assessment in the context of national fortune value. The famous classic A. Smiths developed an idea of labor activity in his scientific work “An Inquiry into the Nature and Causes of the Wealth of Nations”, in which he introduced and explained the term “economic man”, derived the concept of work efficiency and divided it into efficient and inefficient. A. Smith defined man’s labor as an important factor for forming and maintaining society’s wealth. Adam Smith, in focusing on differentiation and labor compensation, specified, that “labor compensation depends on whether the activity is easy or difficult, clean or dirty, honorable or humiliating” [2, p. 222].

Continuing the research, D. Ricardo, the author of labor theory of value, proved that worker’s labor is the only source of goods value, on which the income of bourgeois society’s classes bases. Analyzing laws of labor division in society in his fundamental work “Principles of Political Economy and Taxation”, the scientist emphasized the necessity for market regulation of workers’ salary: “The market price of labor is the price which is really paid for it, from the natural operation of the proportion of the supply to the demand; labor is dear when it is scarce, and cheap when it is plentiful. However much the market price of labor may deviate from its natural price, it has, like commodities, a tendency to conform to it” [3, p. 86]. Thus, we may note that in D. Ricardo’s opinion work efficiency depends, first of all, on man’s creative forces and then on machines.

Karl Marx also made a great contribution into development of human capital concept. Unlike D. Ricardo, he understood the category of “working force” more generally and considered it as “the totality of physical and spiritual powers, which a living person owns ... and uses every time when he makes any user value”. The value is created in the working process, which is not limited by expenditure of labor power, but is a process of society and nature’s cooperation, characterized by work efficiency. The value depends on labor force qualification. [4, p. 70-80]. K. Marx saw a man himself as a main capital and highlighted the significance of education, working experience and expenditure of free time in person’s development.

Thus, the early studies of human capital are based on the fact that during its functioning human capital creates more value than had been invested into it. Particularly this idea served as a basis for human capital theory. Such famous scientist as L. Walras, J.M. Clark, F. Liszt, J. McCulloch, G. McLeod, A. Marshall, J. Mill, F. Sei, J. Thunen, I. Fischer and others greatly contributed the development of the theory in late 19th and early 20th
century. So, F. Liszt, W. Roscher and J. Mill noted that the capital is not a man himself, but his inherited and acquired skills to work and such qualities as education and qualification. At the same time, in late 19th and early 20th century a number of scientists considered a man to be the capital and not his skills (L. Walras, J. McCulloch, A. Marshall, J. Thunen, T. Vinshtein, W. Farr, I. Fisher).

In the present context, I. Fischer [5, p. 24] defined “human capital” not only as the totality of people’s knowledge and skills, ability to work, but also included to the notion physical, psychological, ideological and cultural attributes of the human: physical strength, visual appeal, communication skills, ability to make decisions, take responsibility, organizational skills, in other words entrepreneurial skills, and highlighted that education is only a prerequisite, but not the guarantee of life success.

Another interesting idea was a theoretical paradigm by A. Marshall [6, p. 124], who considered human capital unreal, although included to the non-material wealth human’s strength, skills and habits, which directly favor the growth of work efficiency that is especially important comparing to other capital types. Besides, the scientist introduced a concept of “personal capital”, and while analyzing it, he pointed the necessity to concentrate particularly on human’s abilities, since “in a sense, there are only two agents of production, and that is nature and man. Capital and organization are the result of the work of man aided by nature, and directed by his power of forecasting the future and his willingness to make provision for it. If the character and powers of nature and of man be given, the growth of wealth and knowledge and organization follow from them as effect from cause”[7, p. 209].

Changes in social and economic life caused by dynamic scientific and technical progress significantly influenced the formation of human capital theory as an individual scientific concept. Starting form 1960s, society needed highly skilled workers, which stipulated the shift of focus towards the significance of human’s education, qualification and role of hard labor within his activities.

T. Schultz is another famous American scientist, a Nobel Prize winner, who greatly contributed the formation of human capital theory as a separate economic concept. In his works “The formation of human capital”(1960) [8] and “Investment in human capital” (1961) [9] he explained the idea that since “education is just one form of capital, and it is called human capital, because this form becomes a part of a human, and is a capital due to being the source of future pleasure or earnings, or both” [9, p. 13].

Therefore, under “human capital”, T. Schultz meant everything that was
the source of future pleasures or earnings, or both; and defined human capital as any assets – material or human, which is able to generate the flow of future income.

Scientific studies of G. Becker (a Nobel prize winner as well), particularly his work “Human capital”, played a key role in the development of human capital theory [10]. The scientist’s merit in the development of human capital concept lies in that he theoretically explained the human capital concept as economic category; highlighted special and general investment in human; calculated statistically correct economic education efficiency, in other words quantitative evaluation of investment in a human, and compared it to company profitability; accomplished a shift from current indices to indices which cover entire life cycle (lifetime earnings); marked out investment aspects in agents’ behavior on labor market; proved the necessity to determine person’s time as a key economic resource; explained the structure of personal income division, age-related dynamic of earnings, inequality in men’s and women’s labor compensation, etc. [11, p. 28].

One more American scientist L. Thurow, who generalized early studies of undefined concept of human capital, proposed his own explanation in the development of these scientific researches. In his opinion, “Human capital represent people’s abilities to produce goods and services” [12, p. 15]. The scientist noted that human capital was inseparable from its bearer and included such human traits as respect to political and social stability, which mainly results from appropriate upbringing and education.

I. Fischer, R. Dornbusch and R. Schmalensee proposed their understanding, which may be summarized as follows: “Human capital is an extent of ability embodied in the human to generate income. Human capital includes natural skills and talent, as well as education and acquired qualification”[5, p. 302]. Sharing D. S. Nasypayko’s views [13], we may consider this interpretation of human capital as a narrow one.

It is also worth mentioning an important scientific undertaking of J.A. Mincer, who using models of human capital, performed an empirical analysis of income distribution in order to explain difference of in equation and workers’ income dissymmetry, which depend on the level of education, experience and age, to interpret forms of age-related earnings profiles, to explain differences of income distribution between regions and countries.

Drawing on the key moments of his human capital concept, several reasons can be found to explain the differences of unequal income of the same educational programs and age: different accumulated personal capital despite the equal length of coursework due to the different quality of education and return rate of school education; different post-graduate investment behavior; different speed of post-graduate investment return [14, p. 32].
During the era of Soviet economy, when socialist system denied product component of labor force, the human capital theory was mostly developed only in 1990s. However, it did not influence the scientific results of those authors, who devoted their studies to labor, labor efficiency, and labor activity in all its forms. In this context, the scientific undertakings of G. Yegiaazaryan, V. Zhamin, S. Strumylin, L. Jacobson and many others should be noted.

In general, scientists of those days developed a theory of complex labor, highlighted the possibilities of efficient budget use, which was allocated to functioning of social sphere, studied the process of budget distribution according to education level etc. It should be mentioned that it was particularly S.G. Strumylin who first, in researches of the Soviet times, tried to calculate the growth of national income due to educational factor, which allowed to talk about efficiency of money investment in the education development.

According to his research, “benefit from increasing work efficiency surpasses the corresponding state’s expenses on school education by 26.3 times. Treasury’s capital expenditures pays out greatly already in first one and a half years, and during next 35,5 years the state annually receives net income from this “capital” without any expenses. It would be difficult to create something more profitable than such “capital” investment. Besides, we do not count in those benefits, which the employee, increasing his earning, simultaneously gains” [15, p. 81].

There are also some national scientists notable for their deep theoretical and practical studies of human capital issues, who propose a new valid categorical system related to the given problem. They are V. Antonyuk, C. Bandur, V. Blyzniuk, D. Bogynia, I. Hnybidenko, O. Hrishanova, B. Danylyshyn, V. Danyuk, I. Dunaiev, T. Zayatz, G. Zelinska, A. Kolot, V. Kutzenko, O. Levchenko, E. Libanova, O. Makarova, V. Onikoienko, M. Semykina and others.

Several concepts, explaining the “human capital” category, are also developed within foreign and national scientific knowledge (table 1).

A great number of definitions shows the considerable attention paid by foreign and national scientists to this problem. Moreover, scientists not only view human capital differently in economic literature, but also define this category from different aspects. Thus, in some cases, they refer to concept content and in others; they discuss forms of human capital existence.
Table 1

Foreign and national scientists’ approaches to explain the concept of “Human capital”

<table>
<thead>
<tr>
<th>No</th>
<th>Author(s)</th>
<th>Essence of “Human capital” category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W. Petty</td>
<td>Human capital is the value of the entire population</td>
</tr>
<tr>
<td>2</td>
<td>A. Smith</td>
<td>Capital is the knowledge, skills, experience and abilities that workers have</td>
</tr>
<tr>
<td>3</td>
<td>J. Mill</td>
<td>The category of human capital includes acquired skills that serve as a means of labor and fully implemented in the working process</td>
</tr>
<tr>
<td>4</td>
<td>D. Begg</td>
<td>Human capital is a stock of professional experience accumulated by an employee and provides the basis for the potential growth of future income</td>
</tr>
<tr>
<td>5</td>
<td>W. Bowen</td>
<td>Human capital consists of acquired knowledge, skills, motivation and power which are vested in the people and can be used over a period of time to produce goods and services</td>
</tr>
<tr>
<td>6</td>
<td>G. Becker</td>
<td>Human capital is formed by investments in people, where education, training in the workplace, health care costs, migration and search for information on prices and incomes are the key investments</td>
</tr>
<tr>
<td>7</td>
<td>E. G. Dolan</td>
<td>Human capital is a capital in the form of skills acquired through formal training or practical activity.</td>
</tr>
<tr>
<td>8</td>
<td>Karl Marx</td>
<td>Saving of working time in terms of direct production process can be viewed as the production of main capital, and this capital is the man himself</td>
</tr>
<tr>
<td>9</td>
<td>I. Fisher</td>
<td>Measure of person’s ability to generate revenue (the structure of human capital consists of innate abilities, talents, education and acquired skills)</td>
</tr>
<tr>
<td>10</td>
<td>D. Hatch T. Davenport</td>
<td>The total value of investment in employee’s education and skills which are considered to be his competence and future benefits</td>
</tr>
<tr>
<td>11</td>
<td>S. Strumylin</td>
<td>Human capital is formed owing to the return on investment in education, with labor qualification factors playing a major role</td>
</tr>
<tr>
<td>12</td>
<td>A. Dobrynin, S. Diatlov, N. Ushenko</td>
<td>Human capital is seen as a bearer of system relations in social reproductive process, in which individual form of labor integrates into the public one</td>
</tr>
<tr>
<td>13</td>
<td>O. Hrishnova</td>
<td>Human capital is formed and developed as a result of investment and accumulated personal health, knowledge, skills, abilities, motivations, which are specifically used in any area of economic activity and promote the growth of labor efficiency and thus affect the growth of its owner’s revenue, company profits and national income</td>
</tr>
</tbody>
</table>

In his scientific studies, O.S. Mocherna points that the complexity of “human capital” category leads to focusing on defining this or that feature as well as on entire complex of the concept (table 2) [16].
### Table 2

Systematization of approaches for defining the social and economic category of “human capital”

<table>
<thead>
<tr>
<th>No</th>
<th>Author(s)</th>
<th>Approach</th>
<th>Category core</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W. Bowen, L. Thurow, E. Dolan, D. Lindsey, G. Lorman, D. Fink, R. Ton,</td>
<td>Consumer – resource</td>
<td>Human capital as a set of all possible employees’ qualities, which define</td>
</tr>
<tr>
<td></td>
<td>V. Antoniuk, I. Fischer, R. Shmalensee, H. Lee, R. Dornbusch, W. Kutsenko,</td>
<td></td>
<td>their efficiency and can be a source of income for people, families, businesses</td>
</tr>
<tr>
<td></td>
<td>G. Yevtushenko, M. Hyuliz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>G. Becker, T. Schultz, G. Mankiw, V. Basiv, D. Bogynia, O. Holovin, V.</td>
<td>Investment</td>
<td>The human material as an intangible asset that is formed and accumulated as</td>
</tr>
<tr>
<td></td>
<td>Hoylo, O. Hrishnova, M. Kim, E. Libanova, G. Leech, V. Mandybura</td>
<td></td>
<td>a result of investment in education, health, recreation and cultural develop-)</td>
</tr>
<tr>
<td>3</td>
<td>M. Kritskyy, I. Ilyinskyy, A. Dobrynin, S. Diatlov, Y. Tsyrenova</td>
<td>Historic (civilization)</td>
<td>Human capital represents also a form (organization, operation, development) of human productive powers, which is adequate to post-industrial society of scientific and technological era, and is based on the movement of the economic entity as a new force in social progress</td>
</tr>
</tbody>
</table>
| 4  | K. R. McConnell, S. L. Brue, N. Holikova                                  | Cumulative       | Human capital as an intangible asset that accumulates as a result of past invest-
|    |                                                                            |                  | ment in education, training, health care and other                            |
| 5  | Y. Ben-Poret, R. Ehnenberg, R. Smith, T. Devenport                        | Personal         | Human capital as an asset owned by employees (not their employers), who have    |
|    |                                                                            |                  | and decide when, how and where they will invest it                           |
| 6  | J. Coleman, O. Ubeysvok, A. Bilyk                                         | Psychological     | Human capital appears as a combination of social activity with mental reality which is personal perception of own abilities |
| 7  | R. Florida, T. Melanger                                                    | Spiritual and informational mobility | Human capital is a highly mobile factor that can relocate, but is less important than the creative class |

Having summed up the results of fundamental theoretical researches, we can define that human capital is the totality of skills, knowledge, motivation and other traits allowing a human to perform successfully certain profes-
However, the following circumstances should be taken into considera-
tion:
firstly, human capital is available reserve of skills, knowledge and abilities which people specifically use in any field, that in its turn leads to their development and work efficiency growth;
secondly, appropriate use of this reserve in the form of highly produc-
tive activity increases human’s earnings (revenue);
thirdly, due to increasing income an employee can afford to use part of it for treatment, education etc. As a result, he will increase his potential (creative, intellectual, physical) and hereafter use it more efficiently.

Having generalized various scientific approaches, we can sum up that in terms of the functionally-based approach for analyzing economic phenome-
na, human capital is formed as a result of investment and accumulated per-
sonal health, knowledge, skills, abilities, motivations, which are specifically used in any area, and promote the development and growth of labor efficiency, and thus affect the growth of its owner’s revenue. Contemporary stage of society’s development showed that the problems related to the for-
mation of human capital are not only of individual importance, but also highly significant for all other level of production system organization. As Korytskyi A.V., Diatlov S. A., Stryzhak O. O., Nasypaiko D. S. [13, p. 17-
18] highlight in their studies, the development and implementation of measures for intensive accumulation and more efficient use of human capital depend on how the government, family and social institutions support the development of personal intellectual and creative abilities and how they promote person’s activity in economic field. Human capital development is the main factor of economic modernization; it is an important task to be solved in all countries, which are under postindustrial transformation.

Amartya Sen, the winner of Nobel Prize in Economic Sciences (1998), with his theoretical studies influenced greatly the present understanding of human potential development. In 1989, he published his work “Development as Freedom” where he used an approach called capability approach. A. Sen considered the development process as a process of person’s capability enhancement, and not as the increase in material and economic wealth. From his point of view, society’s standards of living should be estimated not by average income, but by people’s abilities to lead the life worth living in their opinion. He saw the objective of social development not in endless production growth, but in creation of possibility for people to have wider choice: choice to do more activities, live longer, escape from disease, which can be avoided, and have access to knowledge. A. Sen related the given process with the expansion of person’s freedom to choose the most
desired variant out of the great amount.

On the base of A. Sen’s concept, the development was defined as a process that focuses on a person. Over some time, a group of experts from UNDP united this idea with many others and formed the basis of conceptual approach for human development, which was first introduced in 1990 Global Human Development Report [20]. According to UNDP definition, “human development is a process of enlarging people's choices. In principle, this choice can be infinite and change over time. But, at all levels of development, the three essential ones are for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for a decent standard of living. If these essential choices are not available, many other opportunities remain inaccessible” [20, p. 10].


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КОНЦЕПТУАЛЬНІ ПІДХОДИ ДО ВИЗНАЧЕННЯ ЛЮДСЬКОГО РОЗВИТКУ В ТЕОРІЇ ФОРМУВАННЯ ЛЮДСЬКОГО КАПІТАЛУ

У статті визначено основні концептуальні підходи до визначення людського розвитку в теорії формування людського капіталу в умовах глобалізації. Проаналізовано тлумачення людського капіталу зарубіжними і вітчизняними вченнями-економістами. Виконана систематизація підходів до визначення соціально-економічної суті категорії «людський капітал».

Ключові слова: людський розвиток, глобалізація, людський капітал, Програма розвитку ООН, інвестиції, світова економіка.

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КОНЦЕПТУАЛЬНЫЕ ПОДХОДЫ К ОПРЕДЕЛЕНИЮ ЧЕЛОВЕЧЕСКОГО РАЗВИТИЯ В ТЕОРИИ ФОРМИРОВАНИЯ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА

В статье определены основные концептуальные подходы к определению человеческого развития в теории формирования человеческого капитала в условиях глобализации. Проанализировано толкование человеческого капитала зарубежными и отечественными учеными-экономистами. Выполнена систематизация подходов к определению социально-экономической суті категории «человеческий капитал».

Ключевые слова: человеческое развитие, глобализация, человеческий капитал, Программа развития ООН, инвестиции, мировая экономика.