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HUMAN'S CAPITAL AND SUSTAINABLE DEVELOPMENT OF SOCIETY

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Александров І.О., Лебідь Н.Г. Людський капітал й збалансований розвиток суспільства.

Аналізування етапів дослідження значущості людського капіталу у збалансованому розвитку суспільства підтверджує, що цей ресурс є головним фактором. Обробкою статистичних даних методами економетрії є основою кількісної оцінки впливу людського капіталу на зростання макроекономічних параметрів країни.

Ключові слова: людський капітал, збалансований розвиток, макроекономічні параметри, кількісна оцінка

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The review study phase's importance of human capital in a balanced social development indicates that this resource is a major factor. Statistical data processing methods are the foundation of econometrics quantifies the impact of human capital on the growth of macroeconomic parameters of the country.

Keywords: human capital, sustainable development, macroeconomic parameters, quantitative evaluation

At the present stage of social development of human capital becomes the main driving force of this process. But the economic literature still refined the concept of the term, investigated the issue of priority investment in human capital, its impact on the rate of sustainable economic development. But the economic literature still refined the concept of the term, investigated the issue of priority investment in human capital, its impact on the rate of sustainable economic development. The urgency of the problems caused by the growing interest in human capabilities, enhance their intellectual activity that coincides with the general law of development of modern science, particularly in the institutional part.

The aim of the article is to evaluate methods of quantitative estimation of parameters of human capital, analyzing its significance and develop recommendations for its reproduction as a major factor of sustainable social and economic development of society.

Analysis of recent researches and publications

In Western Europe, the USA and Japan in personnel management and human capital as a factor of social and economic development over the past decade there have been substantial changes. Appeared a new look at one of the key resources of the economy, which significantly affected the increasing role of human capital society, dependent production of motivating staff personnel, the efficiency of its use.

The founder of the English classical political economy, famous aphorism by William Petty (1623-1687) – "Labour is the father of wealth, and land – his mother" tried to establish the monetary value of production quality (similar consumer value) person. In his view the value of the mainstream, as well as the earth is flat revenue they bring. They noted that the wealth of society depends on the nature of the knowledge of people and their ability to work. So they estimated adult population is twice more than children, for example, from his point of view a navigator in its value equal to three farmers. In the 60s of XX century, a new term "human capital", the founders of this theory assumed G. Becker (1930-2014), T. Schultz (1902-1998) and others.

Most developed countries as a result of an effective education system are up to 40% of GDP, it is confirmed that human capital is a real factor in socio-economic development of society and an attractive investment (fig. 1).

New technologies as a factor of social and economic development are closely related to human capital is, in fact, its products. This development at all levels of study is the result of productive use of economic potential. It defines a set of resources (factors) that involves transforming a useful result of human activity. Such factors include the following expedient of groups (ranking based on expert estimates): 1) the number, composition and quality of natural resources; 2) the number and quality of the labour force; 3) the amount and composition of capital; 4) Technology; 5) raising aggregate demand; 6) distribution. Consistency of the ranking factors is quite explainable. And the first group of factors – natural resources – the economy is the basis for the use of the first group of factors need quality work. Unlike the first he was quite mobile, so it is effectively used economically developed countries. Countries with insufficient resource efficiency losing the best part of their workforce due to migration, and as a result, part of the first group of factors.

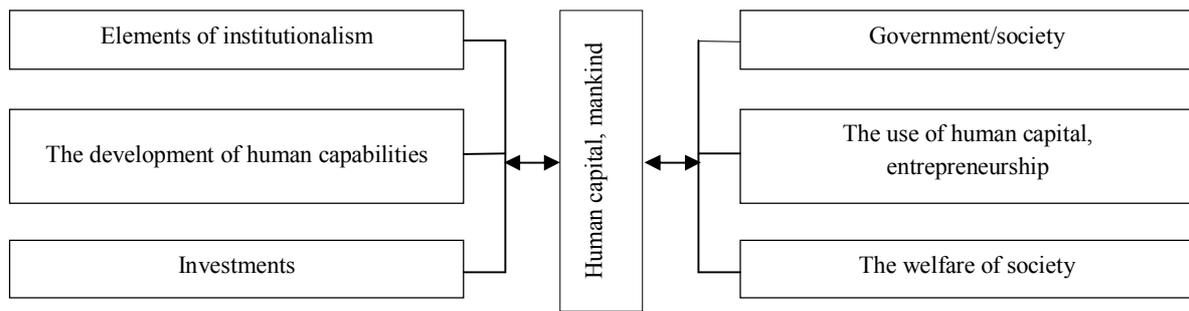


Fig. 1. Investment in human capital series

Source: Own elaboration

At the entity level human capital is a set of qualifications, physical ability and professional staff. Therefore, the theory of human capital is to ensure that the center of the concept of investment policy is the man who is regarded as the highest value, based on recognition of the economic viability of investments related to recruitment, support in working condition, lifelong learning, observation skills, potential the opportunities inherent in the individual.

Then we can define the characteristics of the concept of human capital:

- the use of economic criteria for evaluating human factors;
- changing the general philosophy of management and staff;
- improvement and adaptation of personnel policy to new conditions.

This concept is central to ensuring the competitiveness of enterprises, production and workers in the labor market.

It should be noted that the nature of the variability of socio-economic development, the depletion of natural wealth pose new challenges, such as the formation of new research methods, including these parameters metrology, analysis, modelling and interpretation tools.

The main part

Main directions of quantitative assessment of human capital. In terms of meaningful human capital, including potential health, knowledge and abilities that are implemented by:

- streaming, storage capacity abilities of the phases of life;
- efficient use of human capabilities to increase productivity;
- increase in revenues is motivating workers to invest in human capital and its cumulative accumulate.

There is a unity of physical and human capital that is both capitals are essential factors for socio-economic development. However, it is observed that preferred human capital.

Regardless of the investment sources (state, company, family or person individually) in human capital and increasing use of human capital decisive extent controlled by man. Therefore, the element of human capital motivation is important and necessary. Investments in human capital in terms of providing significant, long time and aggregated by the nature of the economic and social impact. It is different from the degree of physical liquidity, as a man and his human capital are inseparable, so ownership of human capital nobody can be transferred.

Methods for quantitative assessment of human capital. Human capital as an economic category is complex qualitative and quantitative characteristics. Modern theories of human capital is measured not only the volume of investment in human capital, but also the amount of accumulated individual human capital and establish the value of total human capital.

Quantitative characteristics are: population, active population, students, students and others. The modern conception of intangible factors of production of new value embodied in the concept of "intellectual capital" in the structure which occupies a leading place its component "human capital", in this context, the assessment of human capital is a priority for businesses. However, in modern enterprises assess human capital is not included in the value of the company [6].

Estimates of the components of human capital carried out at different economic levels:

- micro level – human capital at the individual level and human capital enterprises and firms;
- mezzio level – human capital of large corporations and regions;
- macro level – total human capital across the national economy (society);
- mega level – integrated human capital in a global, worldwide.

With all the variety of assessment methods of human capital distinguish several basic approaches that are based on: investment in human capital; capitalization of return; natural indicators, namely the skills, competence and literacy.

The method of calculating the costs of human capital is one of the most common and can be implemented, direct and indirect ways. The method of calculating the direct personnel costs are the most simple. The advantage of this method is simplicity, lack – incomplete assessment of the real value of human capital due to

lack of standards (regulations) of accounting and statistical records. In this case, the nominal annual value of the human capital of the entity (K_h) can be determined by the cost of living labour all staff:

$$K_h = \frac{F_p + F_m + C_a + C_t}{N_p}, \quad (1)$$

where F_p – the actual or planned values of annual fund payment labour of industrial production personnel;

F_m – actual or planned values of annual fund of material incentives (incentives) employees of the company, if it is provided in a separate form;

C_a – annual costs and encourage labour employees from other (additional) (not with funds i) funding sources, such as income earned by unplanned execution of orders received by, or non-core (indirectly, related) activities;

C_t – annual training costs (training), training, training (professional level) of all categories of workers in the enterprise;

N_p – actual average number of all categories of personnel.

The method of determining the initial and renewal costs for personnel costs the company sees as related to the acquisition and replacement of personnel, not to its content and based on the model of E. Flemholtsa, i.e. the initial costs include labour costs and initial training, and to reduction – direct costs associated with payments to liberate and indirect, associated with decreased productivity and employee before retiring mood in the team. One drawback is its inability to accurately determine indirect cost recovery.

The method of measuring the value of individual employees. Equation 2-4 show that the value of the employee determined taking into account the probability that it will work in the organization over time, determine the expected realized costs. The expected value is realized in turn consists of two elements: the expected value of the conditional probability and the continuation of the organization.

$$V_r = V_e \cdot L_t, \quad (2)$$

$$L_t = 1 - L_p, \quad (3)$$

$$C_a = V_e - V_r = L_p \cdot L_t, \quad (4)$$

where V_e and V_r – the expected and realized notional value;

L_p – the likelihood that the employee will work in the organization after a certain period of time;

L_t – likely the employee is released from the organization or turnover rate;

C_a – alternative costs associated with turnover.

Likely model for measuring individual and conditional sales value in monetary terms can be presented in sequence: a) determining the position of the employee career development; b) valuation of positions for each organization or positional value of the employee; c) predicting the expected lifetime of the person in the organization; d) a description of the expected career path of the employee, including dismissal from employment estimate the probability of future employee positions; d) discounting the expected cash income to determine the new value of the employee.

Cost method to the valuation assumes that all costs associated with human capital are grouped into: payroll; the cost of maintenance and reproduction of intellectual capital and the "health capital" [7-8].

The comparative method. The essence of the comparative method is to identify differences between the object evaluation and analogues based on the mass of capitalization of future income and value added management.

The capitalization of future income based on determining the value of human capital and economic benefits from its use. This involves measuring the value added contribution of key management personnel (senior manager) in the value added of the entity, that is:

$$AV = AV_b - I_c - AC, \quad (5)$$

where AV – added value;

AV_b – the value added business;

I_c – income earned from the capital of the company in the event of alternative use;

AC – administrative costs.

The review found that the present resources management at all levels is used inefficiently.

Expert method qualitative assessment is rather subjective, though the use of neural networks can reduce the error of some polls.

Comparative analysis of methods for assessing human capital allows us to generalize that the basis of the calculations is to evaluate the investment in human capital, capitalization and efficiency of these investments, as natural indicators. The biggest problem in the calculations remains incomplete information base that demands perfection regulations (standards) of accounting.

Accounting and evaluation is subject only to the intellectual capital that is identified with the intangible assets. This practice is not underestimating the inclusion of human capital assets of the company leads to a significant loss of resources and significantly lowers the cost of capital market business. One reason for this situation is the lack of theoretical and methodological basis for evaluation of human capital.

Means of assessing the development of human capital. For evaluation and development of human capital is measured by the standard of living, literacy, education and longevity of the population, the state of health care and of GDP per capita. These figures are taken into account when calculating the index of human capital (IRLK). In 1990 Project of the United Nations published the first report on the assessment of economic and social progress of the world where the notion, some provisions metrology and parameters of human development: "Human development is the process of expanding the range of choice. The most important elements of choice – to live long and healthy lives, get an education and have a decent standard of living. Additional elements of choice include political freedom, guaranteed human rights and self-respect". This belief system is aimed at improving the quality of life, expanding and improving its capabilities in all areas [8].

Investments are the source and the driving force behind the reproduction of the human capital. They are the basis for its creation and development through education, health, training, economic motivation, geographical mobility, and so on.

Investment in education in a meaningful sign is usually divided into formal and informal. Formal investments aimed at obtaining secondary, special, higher and postgraduate education, professional training in the workplace, various courses, training in the magistracy, postgraduate, doctoral and others. Informal – a self of individual. When the level of education increases the effectiveness of a worker or by increasing productivity, increase the value of human capital.

Analysis of human capital development. In world practice for the evaluation of human capital being used various indicators, the most significant of which is the macro index of human development.

The overall indicator for intercountry comparison and measurement standard of living, literacy, education and longevity as the main characteristics of the human potential countries surveyed is the standard tool for comparing the overall living standards of different countries (Tab. 1).

Table 1. Human Development Index 2014

Place in the world in terms of HDI	Country	Quantitative HDI value	The components of the HDI		
			Longevity (years)	Knowledge (%)	GDP per capita (thousand. Dollars. USA)
1	Norway	0.944	81.6	0.91	499817
5	USA	0.914	79.1	0.89	17419
17	Japan	0.89	83.5	0.81	4601.461
83	Ukraine	0.734	71	0.8	131.805
114	Moldova	0.663	71.6	0.7	7.962

Source: Own development according to the authors [13]

According to the ranking in the Human Development Report 2015 for best country life recognized Norway – 0.944, the top five included Australia – 0.935, Switzerland – 0.930, Denmark – 0.923, Netherlands – 0.922. On the recommendations of the said institution as HDI standards apply maximum life expectancy (85 years) and minimum (25 years) and the calculation of human development.

Cyclical changes in the HDI prove unstable socio-economic development. Ukraine's achievements over the past two years have increased by 2 positions in the world ranking. UN Commission determined that, taking 81 Ukraine demonstrates a good index of human development. This is primarily due to the fact that educational indicators are relatively high, and the index of public education Ukraine in the ranking of middle-Index still holds the first place on a par with countries with high levels of this indicator. In addition to life expectancy and economic factors affecting quite low health status, because there is a tendency to reduce this index (fig. 2). Census results as provided for in 2017, certainly adjust set trends, received in this regression.

Equation $HDI = 0.0002x^4 + 1.5091x^3 - 4554, 5x^2 + 6E + 06x - 3E + 09$ when $R^2 = 0.99$ confirms the likelihood of deterioration in the human development index Ukraine. This fact is based a connection between a variation of variables, i.e. longevity, knowledge and GDP.

Thus, low investment and state wages, lack of attractive jobs and decent working conditions led to the outflow of qualified personnel from Ukraine. In the pre-crisis period to 2008-2009 years, almost a third of the labour force was foreign workers and, consequently, Ukraine experienced significant economic and social losses.

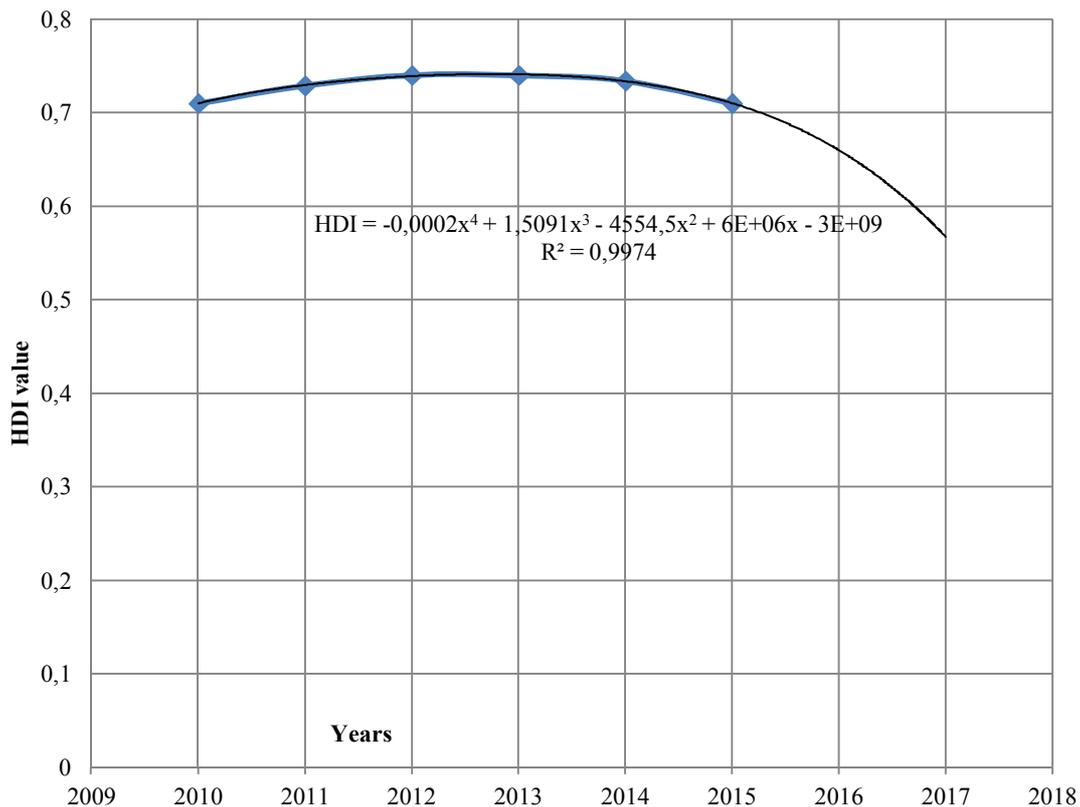


Fig. 2. Dynamics of HDI Ukraine

Source: Own development according to the authors [13, 14]

Comparative analysis and evaluation of human capital in the country. Human Development Index in Ukraine in 2014 amounted to 0.734 and occupied 83 place in the ranking of 186 countries in the world and that is the basis of Ukraine referring to countries with high human development. However, it should consistently examine the components of the index that shape and influence its value.

According to methodological approaches, life expectancy was 70.1 years and the country was in the 122-123 ranking on the ground along with Nepal, Mongolia, Micronesia, Fiji and Bangladesh [12-14]. However, there is trend of growth in 2008-2009. He rose from 68.3. to 70.44 – in 2009-2013. to 71.18.

During this period, the mortality rate Ukraine 395 men and 148 women [14]. However, in Germany the figure was 99 for men and 53 for women in Italy – 77 and 41, Germany – 99 and 53, France – 54 and 117, Japan – 86 and 42, UK – 95 and 58. The influence of the studied parameters is determining the state of the human capital of Ukraine. Because, despite the fact that the health system in the country is adequate public support, care for their own health of citizens in Ukraine and his condition directly related to the level of material necessary for health protection and treatment.

Statistics show that the average wage in the EU above the average wage in Ukraine is almost 4 times, that is, the exploitation of workers in Ukraine is four times higher than in the European Union. Solving these problems should be implemented on a parity basis by the interaction of the state and business, business alliances with the introduction and implementation of an effective strategy for increasing the competitiveness of young people in the labour market in terms of rapid changes in supply and demand.

Another problem is the fact that retired workers load (1 pensioner falls 1.5 employees) as a result of an aging society due to migration competitive professionals and reduction in life expectancy and the growing deficit of the Pension Fund of Ukraine.

This situation demonstrates the need to address the problem of shadow wages, which fully can promote the potential of the social security of the population able to significantly improve the human development index by improving living standards, life expectancy and size of household spending, which directly affects gross domestic income per capita.

Forming tool for analyzing social and economic development. The increase in GDP as the macroeconomic setting is build-up resources and increase is defined as the efficiency of their use. The first requires the expansion of extensive growth factors; the second brings extensive enlargement factors. Proved, that human capital provides the growth of the main macroeconomic parameters of the country (fig. 3).

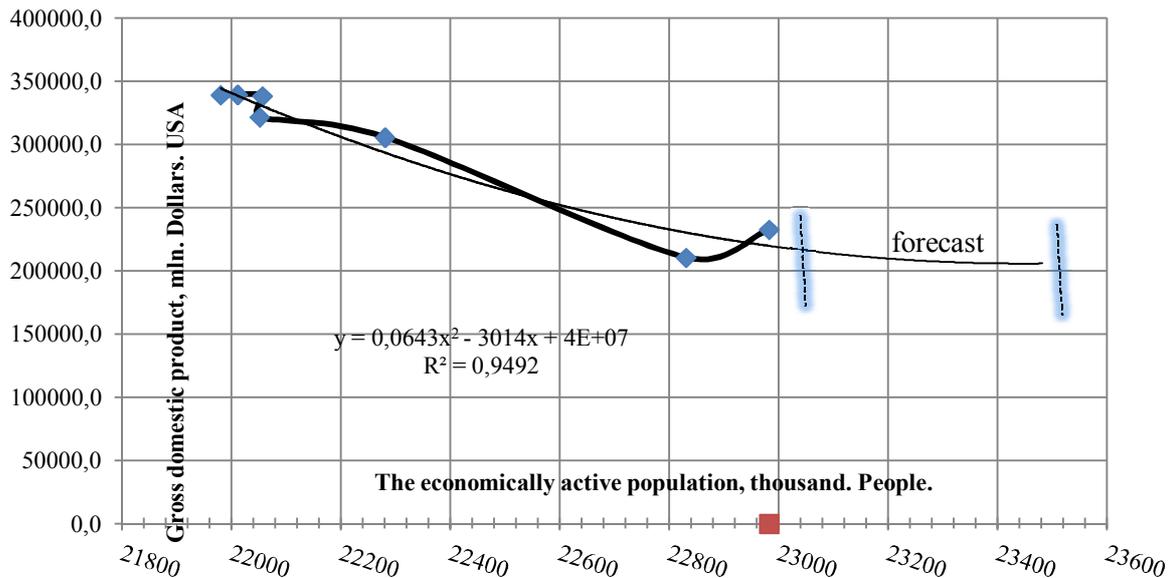


Fig. 3. GDP dependence on the number of economic active population
 Source: Own development according to the authors [13, 14]

The most important indicator of socio-economic development is productivity, i.e. the result of the use of human capital. She measured the ratio of production costs to (use) of living labour:

$$w = \frac{Q}{L}, \text{ so we have } Q = wL, \quad (6)$$

where Q – volume of production;
 L – labour costs,

How to confirm that the labour productivity (w) concentrated, comprehensively describes the possibilities of social and economic development and economic presence deterministic communication between Q , w , and L .

The stochastic nature between the results of the use of resources, including human resources displays various production functions:

$$Q = f(L, R), \quad (7)$$

where Q – volume production;
 L – labour;
 R – tangible assets.

In practice, often use the classic Cobb-Douglas model:

$$Q = A \cdot K^\alpha \cdot L^\beta, \quad (8)$$

Then, because it is labour productivity

$$w = \frac{Q(K, L)}{L}, \quad (9)$$

And marginal productivity or marginal product of labour MY_L is defined as its own derivative Q largest labour spent L , i.e.

$$MY_L = \frac{dY(K, L)}{dL}, \quad (10)$$

Based on the analysis can draw the conclusion that the main factors of socio-economic development should recognize the following:

- Number and composition of the population;
- Qualitative characteristics of health;
- Gross domestic product and its composition;
- National income;
- Gross value added;
- Costs and fixed assets;
- Price index of industrial, agricultural production and the consumer price index;
- Investments and their structure;
- Exports and imports of goods and services;
- Quality of education and others.

Currently, the most significant development is the integration of environmental, economic and social national accounts, including satellite that the proposed United Nations Statistics Division, Sustainable Development Indicators, established Commission on Sustainable Development. For some regions of Ukraine indicators of socio-economic development developed by experts of the Council of Productive Forces of Ukraine (now SI "Institute of Environmental Economics and Sustainable Development) of NAS of Ukraine during the formation of strategies of socio-economic development [18].

Conclusions

In the last stages of social development continues to grow the role of human capital. Therefore, increasing interest in investigating the problems of formation of metrology for analysis and modelling, prioritize investment in human capital and its impact on the rate of sustainable economic development.

The necessity of forming a new paradigm of sustainable institutional framework of social development, taking into account quantitative and qualitative characteristics of human capital.

To improve the quality of modelling effective use of human capital and ensuring balanced development of society subsystems should clarify and improve the basic concepts of integral human development index.

To increase the likelihood of variability modelling parameters of human capital and its efficiency is feasible mining mouth information using selective methods of observation, and reduces the costs of their participation.

Abstract

New technologies as a factor of development, closely related to the quality of human capital. They are their products. Socio-economic development at all levels of study is the result of productive use of economic potential. It defines a set of resources (factors) that provides for the transformation of a useful result of human activity. Such factors include the following groups (ranking based on expert evaluations): 1) the number, composition and quality of natural resources; 2) the number and quality of the workforce; 3) the amount and composition of capital; 4) Technology; 5) increasing the level of aggregate demand; 6) distribution. Consistency of the ranking factors is quite explainable. P first group of factors – natural resources – is the foundation of the economy. The second group is related to human capital. To use the first group of factors need quality work. Unlike the first he was quite mobile, so it is effectively used economically developed countries. Countries with insufficient resources efficiency are losing the best part of labour and, consequently, of the first group of factors. With all the variety of assessment methods of human capital should provide some basic approaches that are based on: investment in human capital; the impact of capitalization of resources; indicators of skills, competencies and education of the population. The increase in gross domestic product as a build-up of macroeconomic parameters defined resources and increases the efficiency of their use. The first requires the expansion of extensive growth factors; the second brings intensive factors of enlargement. Human capital is the growth of the main macroeconomic parameters of the country In the last stages of social development continues to grow the role of human capital. Therefore, increased interest in investigating the problems of formation of metrology for analysis and modelling, prioritize investments and its impact on the rate of sustainable economic development.

Rationale for the formation of a new paradigm of the institutional framework of sustainable social development, taking into account quantitative and qualitative characteristics of human capital is the basis for rational selection criteria for balance. To improve the quality of modelling human capital efficiency and ensure the sustainable development of society subsystems should clarify and improve the basic concepts of integral human development index. To increase the likelihood of variability modelling parameters of human capital and its efficiency is appropriate prey information using low-cost means of sample observation method.

JEL Classification: J01.

Список літератури:

1. Сталий розвиток суспільства: навчальний посібник / авт.: А. Садовенко, Л. Масловська, В. Серета, Т. Тимочко. – 2 вид. – К.; 2011. – 392 с.
2. Приймак В.І. Актуальні проблеми і перспективи розвитку людського капіталу в Україні / В.І. Приймак, С.М. Гинда // Економіка і організація управління. – 2014. – №3 – 199 с.
3. Стратегія сталого розвитку регіону: моногр. / І.О. Александров, О.В. Половян, О.Ф. Коновалов, О.В. Логачова, М.Ю. Тарасова; за заг. ред. д.е.н. І.О. Александрова / НАН України. Ін-т економіки пром-сті. – Донецьк, 2010. – 204 с.
4. Грейсон Дж., О'Делл К. Американський менеджмент на порозі ХХІ століття. – М.: Економіка, 1991.
5. Менеджмент: навчальний посібник/ І.О. Александров, О.В. Половян, К.І. Ткач, С.В. Філіппова, А.В. Шегда, К.С. Безгін та ін; за заг. ред. д-ра екон. наук І.О. Александрова і д-ра екон. наук К.І. Ткача. – Одеса: Астропринт, 2015. – 387 с.

6. Соціально-економічна мотивація інноваційного розвитку регіону: монографія / за заг. ред. д-ра ек. наук, професора О.В. Прокопенко. – Суми: Сумський державний університет, 2012. – 576 с.
7. Захворюваність населення. Статистична інформація Державної служби статистики України [Електронний ресурс]. – Режим доступу: <http://www.ukrstat.gov.ua/>.
8. Чігоряєв К.М. Оцінка вартості людського капіталу на основі проведених витрат / К.М. Чігоряєв // Вісник Томського технічного університету. – 2008. – №6 – Т. 313.
9. Крушніцька Г.Б. Методологічні підходи оцінки людського капіталу підприємства / Г.Б. Крушніцька // Вісник Хмельницького національного університету. – 2013. – №11 – Т. 3.
10. Козак Л.С. Формування сучасного концептуального підходу до визначення сутності нових макроекономічних показників [Електронний ресурс] / Л.С. Козак, Ю.О. Уласенко, О.В. Федорук. – Режим доступу: <http://www.uk.x-pdf.ru/5ekonomika/13083-1-udk-650128-3399-udc-650128-3399-formuvannya-suchasnogo-konceptualnogo-pidhodu-viznachennya-sutnosti-novih-makroekonomi.php>.
11. Корнева К.В. Аналіз, оцінка та тенденції розвитку людського капіталу в Україні [Електронний ресурс] / К.В. Корнева – Режим доступу: <http://repository.hneu.edu.ua/jspui/bitstream/>.
12. Доклад о человеческом развитии 2013. Возвышение Юга: человеческий прогресс в многообразном мире [Електронний ресурс]. – Режим доступу: http://hdr.undp.org/sites/default/files/hdr_2013_ru.pdf.
13. Доповідь про людський розвиток, підготовлена на замовлення Програми розвитку Організації Об'єднаних Націй [Електронний ресурс]. – Режим доступу: <http://hdr.undp.org/en/reports/>.
14. Індекс розвитку людського потенціалу 2013 (рейтинг України) [Електронний ресурс]. – Режим доступу: <http://infolight.org.ua/content/indeks-rozvitku-lyudskogo-potencialu-2013-reyting-ukrayini>.
15. Статистичний щорічник України за 2013 рік; за ред. О.Г. Осауленка; відповідальний за випуск О.А. Вишневська. – К.: Держаналітінформ, 2014. – 534 с.
16. Ревенко А. Україна у світових координатах людського розвитку: тупцювання на місці [Електронний ресурс]. – Режим доступу: <http://gazeta.dt.ua/macrolevel/ukrayina-u-svitovih-koordinatah-lyudskogo-rozvitku-tupcyuvannya-na-misci.html>.
17. Черненко К.П. Аналіз рівня життя пенсіонерів як індикатору ефективності реформування пенсійної системи України [Електронний ресурс]. – Режим доступу: http://www.nbu.gov.ua/old_jrn/Soc_Gum/Npchdu/Economy/2010_120/120-12.pdf.
18. Сибірянська Ю.В. Принцип рівності платника та його реалізація через оподаткування громадян податком на доходи фізичних осіб / Ю.В. Сибірянська // [Електронний ресурс]. – Режим доступу: <http://www.economy.nauka.com.ua/?op=1&z=4501>.
19. Белікова Б.Ю. Методологічні основи дослідження людського капіталу підприємства / Б.Ю. Белікова // Економіка і регіон. – №3. – 2012. – С. 194.

References:

1. Sadovenko, A., Maslovska, L., Sereda, V., & Tymochko T. (2011). Stalyi rozvytok suspilstva [Sustainable Society]. (2d ed.). K. [in Ukrainian].
2. Pryymak, V.I. (2014). Aktualni problemy i perspektyvy rozvytku lyudskoho kapitalu v Ukrayini [Current problems and prospects of development of human capital in Ukraine]. Ekonomyka Ekonomyka i orhanizatsiya upravlinnya – Economics and management organization, – Vol. 3 [in Ukrainian].
3. Aleksandrov, I.O., Polovian, O.V., Konovalov, O.F., Lohachova, O.V., & Tarasova, M.Yu. (2010). Stratehiya staloho rozvytku rehionu [Strategy for the sustainable development of the region: monograph]. NAN Ukrainy. In-t ekonomiky prom-sti. Donetsk [in Ukrainian].
4. Hreyson Dzh., O'Dell K. (1991). Amerykansky menedzhment na porozi XXI stolittya. [American management thresholds on XXI century]. M.: Ekonomika – Economics [in Ukrainian].
5. Aleksandrov, I.O., Polovian, O.V., Tkach, K.I., Filyppova, S.V., Shehda, A.V., & Bezghin, K.S. it all (2015). Menedzhment [Management]. Odesa: Astroprynt [in Ukrainian].
6. Prokopenko, O.V. (Eds.). (2012). Sotsialno-ekonomichna motyvatsiya innovatsiynoho rozvytku rehionu [Social and economic motivation for innovative development of the region]. Sumy: Sumskiy derzhavnyi universytet [in Ukrainian].
7. Zakhvoriuvanist naseleण्या. Statystychna informatsiya Derzhavnoyi sluzhby statystyky Ukrainy [Morbidity of population. Statistical information of the State Statistics Service of Ukraine]. Retrieved from <http://www.ukrstat.gov.ua/> [in Ukrainian].
8. Chihoryayev, K.M. (2008). Otsinka vartosti liudskoho kapitalu na osnovi provedenykh vytrat [Assessment of value human capital on the basis of costs] Visnyk Tomskoho tekhnichnoho universytetu – Bulletin of the Tomsk Technical Universit, 6 [in Ukrainian].

9. Krushnitska, H.B. (2013). Metodolohichni pidkhody otsinky liudskoho kapitalu pidpnyemstva [Methodological approaches to evaluation of human capital enterprises]. *Visnyk Khmelnytskoho natsionalnoho universytetu – Bulletin of Khmelnytsky National University*, 11 [in Ukrainian].
10. Kozak, L.S., Ulasenko, Yu.O., & Fedoruk, O.V. Formuvannya suchasnoho kontseptualnoho pidkhodu do vyznachennya sutnosti novykh makroekonomichnykh pokaznykiv [Formation of modern conceptual approach to defining the essence of new macroeconomic indicators]. Retrieved from <http://www.uk.xpdf.ru/5ekonomika/13083-1-udk-650128-3399-udc-650128-3399-formuvannya-suchasno-go-kontseptualnogo-pidhodu-vyznachennya-sutnosti-novykh-makroekonomi.php> [in Ukrainian].
11. Kornyeva, K.V. Analiz, otsinka ta tendentsiyi rozvytku liudskoho kapitalu v Ukraini [Analysis, assessment and development trends of human capital in Ukraine]. Retrieved from <http://repository.hneu.edu.ua/jspui/bitstream/> [in Ukrainian].
12. Doklad o chelovecheskom razvitii 2013. Vozvysheniye Yuga: chelovecheskiy progress v mnogoobraznom mire [Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World]. – Retrieved from http://hdr.undp.org/sites/default/files/hdr_2013_ru.pdf [in Russian].
13. Dopovid pro lyudskyy rozvytok, pidhotovlena na zamovlennya Prohramy rozvytku Orhanizatsiyi Obyednanykh Natsiy [Human Development Report, prepared on request of the United Nations]. – Retrieved from <http://hdr.undp.org/en/reports/> [in Ukrainian].
14. Indeks rozvytku liudskoho potentsialu 2013 (reytynh Ukrayiny) [Human Development Index 2013]. – Retrieved from <http://infolight.org.ua/content/indeks-rozvitku-lyudskogo-potencialu-2013-reyting-ukrayini> [in Ukrainian].
15. Osaulenko, O.H. (Eds.). (2014). Statystychnyy shchorichnyk Ukrayiny za 2013 rik [Statistical yearbook of Ukraine 2013]. K.: Derzhanalitinform [in Ukrainian].
16. Revenko, A. Ukrayina u svitovykh koordynatakh liudskoho rozvytku: tupsyuvannya na mistsi [Ukraine in world coordinates human development: the stalled]. Retrieved from <http://gazeta.dt.ua/macrolevel/ukrayina-u-svitovih-koordinatah-lyudskogo-rozvitku-tupcyuvannya-na-misci-html> [in Ukrainian].
17. Chernenok, K.P. Analiz rivnya zhyttya pensioneriv yak indykatoru efektyvnosti reformuvannya pensynoyi systemy Ukrayiny [Analysis of how life pensioners performance indicators pension reform Ukraine]. Retrieved from http://www.nbu.gov.ua/old_jrn/Soc_Gum/Npchdu/Economy/2010_120/120-12.pdf [in Ukraine].
18. Sybirianska, Yu.V. Pryntsyp rivnosti platnyka ta yoho realizatsiya cherez opodatkovannya hromadyan podatkom na dokhody fizychnykh osib [Payer principle of equality and its implementation through public taxation tax on personal income]. Retrieved from <http://www.economy.nayka.com.ua/?op=1&z=4501> [in Ukrainian].
19. Belikova, B.Yu. (2012). Metodolohichni osnovy doslidzhennya liudskoho kapitalu pidpnyemstva [Methodological basis of the research enterprise human capital] in *Ekonomika i rehion – Economy and region*, 3 [in Ukrainian].

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