

Olena Dragan,

Doctor of Economic Sciences, Professor

Liubov Tertychna,

Candidate of Economic Sciences, Associate Professor

Department of labor economics and management

National University of Food Technologies, Kyiv, Ukraine

Nadiia Rybak,

Candidate of Economic Sciences, Associate Professor

Department of Economics and Economic Theory

Bila Tserkva National Agrarian University, Bila Tserkva, Ukraine

MODERN LEVEL OF HUMAN CAPITAL OF THE UKRAINIAN ENTERPRISES IN THE CONDITIONS OF TECHNOLOGICAL SPREADS

1. Introduction

Modern technological spreads quickly displace the borders between working tasks, that people execute, and tasks that execute machines and algorithms, causing serious transformations at the labour market. Advanced technologies change the enormous amount of low-skilled jobs and open new possibilities, creating terms for appearance of new and regenerate workplaces, growing the productivity and promoting efficiency of production. Many specialities today, and, also, in the nearest future, will require the complex of the special skills – possessing technologies, ability to settle problems, critical thinking, as interpersonal skills, such, as zeal, readiness to collaboration and ability to have compassion. For this reason in Lecture of the World bank about the world development in 2019 «Change of labour character» the basic role of human capital in the decision of this problem is underlined [22].

Actuality of human capital topic is predefined by that a person is examined in the center of economies as inexhaustible resource that is fundamental in functioning of national economy and certain enterprise. The rates of innovations introduction are growing, and the enterprises, as well as country on the whole, for providing the competitiveness in the future will operate quickly. To take advantage of new technologies and diminish the problems that were generated by them, they will carry out investments for the workers – foremost,

in protection of education and health, that are basis of human capital increase.

2. Analysis of the last researches

Today, the study of the problem of forming and effective use of human capital of Ukrainian enterprises is not simply actual, but has the main value in the structure of socio-economic researches. It envisages the realization of deep scientific researches of this problem.

Many scientific researches of foreign and home authors are devoted to the question of human capital development. Different aspects of human capital conception are described in researches of famous authors of economic science as A. Smith, D. Ricardo, V. Patti, K. Marx, A. Marshall, L. Walrus, I. Fisher and others. As independent direction, the theory of human capital was formed in the 60th of XX century. Awarding standard became the world confession of these researches importance in economy for prominent scientific activity T. Schultz (in 1979) and H. Becker (in 1992). They got Nobel price. In Ukraine the research of human capital problems was activated at the beginning of XXI century foremost due to the scientific developments of O. Hrishnova.

Discussion of many positions and presence of plenty unsolved problems stipulate the necessity of further research of questions in relation to forming, use and development of human capital of both main factor of competitiveness increase of national economy and separate enterprises.

3. Research methodology

In modern society the human capital becomes basis of wealth. Exactly the human capital determines the competitiveness of the economic systems, comes forward as the key resource of their development. The ability of economy to create and effectively use human capitals in greater measure determines the economic force of nation and its welfare.

The object of the developed indexes analysis is directly influence on the level of human capital development of the country, estimation of Ukraine rating place among other countries of the world for realization and confession of domestic enterprises' investments in human capital as the main asset.

Basic material. Human capital can be determined totality of productive capabilities, personal lines and motivations of individuals, that they have in their property, are used in economic activity assist the increase of labour productivity and due to it influence on the increase of income (earnings), profit of the enterprise and national income, formed and developed as the result of investments [2, p. 16-17].

The concept «human capital» means not only the realization of the person's main role in the economic system of society but also confession of investing necessity in a person, as the capital comes and increases by investing and brings long by time and integral by the nature the economic effect. Thus, it follows to take into account, that more quality investments, though they need money more than time, bring, as a rule, better and more longtime effect. Thus, at the world level, without regard to considerable increase in the supply of skilled labour force, the norm of profit from education presents approximately 9% in a year, norm of profit for higher and secondary education is almost 15% in a year [22, p. 19].

Investments in human capital are all types of charges on the person's development in monetary or other form (on education, health protection, mobility), that assist intellectual and professional increase of a person, promote his/her productivity, that influence on future increase of incomes as individual, enterprise and society on the whole.

From all types of investments in human capital the most essential are investments in education and health. Universal and special education improve quality, promote the level and supply of knowledge, the volume and quality of human capital are also increased. Investments in higher education assist forming of highly skilled specialists, highly skilled labour of which carries out the most influence effect on the rates of economy growing [7].

Thus, all types of charges, that can be estimated in monetary or other form and that assist to increase productivity and worker's income in the future, must be examined as investments in human capital, that the state (government), enterprises, educational establishments, non-state public funds and organizations, international funds and organizations, families and separate citizens can be carried out.

The estimation of human capital level can come true on existent rating lists. Index of human development (HDI) (Human Development Index, HDI) is the most popular index, it is integral index that accounts annually for intergovernmental comparison and measures the average level of achievements in three basic measuring of human development: health and longevity, knowledge and deserving standard of living [6, p. 25]. The index is published in the special series of UN reports about human development. In 1990 UNDP published the first “Report about human development” (Human Development Report 1990. Concept and Measurement of Human Development) [14].

Basic measurings of HDI [6, p. 1] are:

- ability to conduct long and healthy life that is measured by the expected life-span at birth;
- ability to get knowledge that is measured by the middle duration of studies and expected studies duration;
- ability to attain the deserving standard of living that is measured by the index of gross national receipt per capita.

Data are also taken into account about the levels of social security, indexes of health and cultural development of population, people participation in making decision, state of criminality, guard of environment [8].

Rating of countries after the index of human development is annually folded by the Program of development of UN (UNDP) from 1990 for 187 countries and the confessed UN territories, in 2015 and 2016 – for 188 countries and territories, from 2017 – for 189 and published in “Reports about human development» (table 1).

As registers in “Reports about human development 2019. After the scopes of incomes and middle indexes level of nowadays: inequality in human development in XXI century» on this index according to statistical data Ukraine in 2018 and 2017 occupied the 88-th place in rating of the countries of human development index among the 189 countries of the world [15, p. 301] (in 2015 it was the 84-th place among the 188 countries of the world [16], in 2014 it was the 81-st place, in 2013 – 83, in 2012 – 78, in 2010 – 69). Norway, Switzerland, Ireland, Germany, Hong Kong (China), Australia, Iceland, Sweden, Singapore and Netherlands are ten states with the very high level of human development in the world. The USA is on

the fifteenth place, dividing this place with Great Britain, and Russia is on the 49th place.

Table 1

**Ranking of some countries in the world according to the
Human Development Index
as of 2018 (2019 report)**

Ranking	Country	Human Development Index 2018 (2019 report)
1	Norway	0,954
2	Switzerland	0,946
3	Ireland	0,942
4	Germany	0,939
4	Hong Kong (China)	0,939
6	Australia	0,938
6	Iceland	0,938
8	Sweden	0,937
9	Singapore	0,935
10	Netherlands	0,933
15	The United Kingdom	0,920
15	USA	0,920
26	Czech Republic	0,891
26	France	0,891
32	Greece	0,872
32	Poland	0,872
88	Ukraine	0,750
89	Dominican Republic	0,745
89	Saint Lucia	0,745
116	Egypt	0,700
188	Central African Republic	0,381
189	Niger	0,377

Compiled by source [15, p. 300-303].

As the human development index measures the country's achievement from the position of health state, receiving education and actual income of its citizens, let's analyse the the level of human

capital development of Ukraine on these indexes: GDP per capita (table 2); average life duration; level of education.

Table 2

Gross Domestic Product per capita in Ukraine for 1990-2018

Years	GDP of Ukraine *, billion USD	Population**,		GDP per capita, USD	GDP per capita growth	
		thousands of people	relative increase, %		absolute, +/- \$.	relative, %
1990	293,235	51 891	—	1742	—	—
2000	32,331	49 177	-5,23	632	-1110	-63,7
2001	39,309	48 662	-1,05	782	150	23,7
2002	43,956	48230	-0,89	879,0	97	12,4
2003	52,010	47801	-0,89	1048,8	169,8	19,3
2004	67,226	47448	-0,74	1367,5	318,7	30,4
2005	89,282	47091	-0,75	1829,2	461,8	33,8
2006	111,885	46771	-0,68	2303,8	474,6	25,9
2007	148,734	46501	-0,58	3069,1	765,3	33,2
2008	188,240	46240	-0,56	3892,5	823,4	26,8
2009	121,552	46044	-0,42	2546,0	-1346,5	-34,6
2010	136,011	45865	-0,39	2974,4	428,4	16,8
2011	163,161	45693	-0,63	3570,8	596,4	20,0
2012	175,707	45577	-0,25	3856,8	286,1	8,0
2013	179,572	45483	-0,21	4030,3	173,5	4,5
2014	132,343	43722	-3,87	3014,6	-1015,7	-25,2
2015	90,939	42836	-2,03	2115,4	-899,2	-29,8
2016	93,263	42668	-0,39	2185,9	70,5	3,3
2017	109,321	42477	-0,45	2640,3	454,4	20,8
2018	130,832	42269	-0,49	3095,2	454,9	17,2

* According to the International Monetary Fund [18].

**Compiled by source [1; 5].

Let's analyse the dynamics of GDP per capita, preliminary finding out the general level of GDP and dynamics of populations quantity, that is presented by the official figures of Government service of statistics, Ministry of finance of Ukraine, World bank and IMF [1; 5].

From data of table 2 it is possible to draw conclusion, that the quantity of Ukrainian population is decreasing every year. It goes to show that the death rate exceeds the birth-rate. In relation to the GDP index per capita we see the negative trend of value of index reduction in 2009, that is related to the world financial and economic crisis. In this period there was a slump of commercial activity of small and large enterprises in the country. It resulted to the increase of unemployment that is negative phenomenon for human capital development on the whole rate. In the period from 2010-2013 there was a positive tendency of increase of GDP value, and in 2014-2015 there was a decline of GDP level, that was predefined by political unstable position and swift depreciation of national currency. In recent year GDP increases as the result of different branches: building (prices grow) industries; part of agriculture increases in GDP structure; changes in bank and financial sphere, the role which had changed. In 2016-2018 the ordinary volumes of export commodities began to recommence from the country due to the set contract about the free trade zone between Ukraine and European Union in January, 2016. However, the mainly extensive way of development and scientific slippage of Ukraine from the leading countries of the world substantially influence on the state of GDP. Therefore, for Ukraine characteristic the development of separate industries of production, that are resource-limited, production, mainly, raw material products, while the prepared products do not conform to international standards. Also considerable influence on the country's GDP state has the high level of corruption.

During the analysed period 1990-2018 the reduction of the population's quantity is reduced approximately on 18,5%, and from 2013-2018 – on 7%, and GDP per capita in Ukraine in 2018 is presented 63,4% the level of 1990, for period of 2013-2018 it reduced on 23%.

Rating positions of Ukraine on GDP per capita according to the data of the World Bank during the period of 2013 is shown on picture 1.

In relation to the average of population's life duration in Ukraine, during the last two decades the value of this index has a positive tendency to increase.

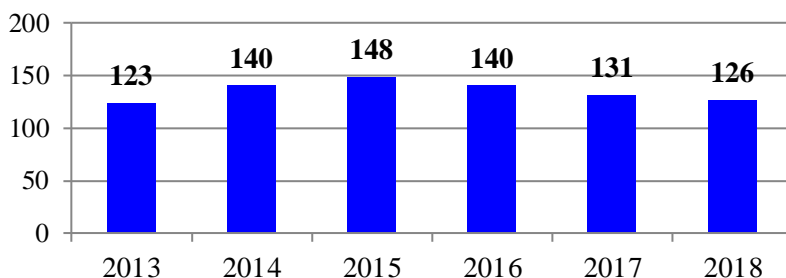


Fig. 1. Place of Ukraine in the World Bank's GDP per capita rating, 2013-2018 Compiled by source [11].

However, it should be noted that life-span of women exceeds life-span of men (table 3).

Table 3
Average life expectancy in Ukraine at birth, years

Years	The average life expectancy of a person, years	Men, years	Women, years
1	2	3	4
1990	70,42	65,60	74,82
2001	67,89	62,32	73,63
2002 ¹	68,32	62,70	74,13
2003 ¹	68,24	62,64	74,06
2004 ¹	68,22	62,60	74,05
2005 ¹	67,96	62,23	73,97
2006 ¹	68,10	62,38	74,06
2007 ¹	68,25	62,51	74,22
2008 ¹	68,27	62,51	74,28
2009 ¹	69,29	63,79	74,86
2010 ¹	70,44	65,28	75,50
2011	71,02	65,98	75,88
2012	71,15	66,11	76,02
2012	71,15	66,11	76,02
2013	71,37	66,34	76,22
2014	71,37	66,25	76,37
2015	71,38	66,37	76,25

Continuation of Table 3

1	2	3	4
2015	71,38	66,37	76,25
2016	71,68	66,73	76,46
2017	71,98	67,02	76,78
2018	71,76	66,69	76,72

Compiled by source [5; 13, p. 56].

Without regard to the increase of life duration, it still remains most subzero in Europe, in addition, Ukraine has the biggest difference in life duration of men and women' life duration among European countries. After the index level of life duration in different countries, that is published in the special report of the UN "Estimation of world population progress", Ukraine took the 114th place among 191 countries of the world (in 2018 life duration was 72) [10]. Leading positions occupy Hong Kong, Japan with the average duration of life is more than 84 (table 4).

Table 4

Average life expectancy for some countries in 2018

Ranking	Country	Index (the average life expectancy of a person, years)
1	Hong Kong	84,7
2	Japan	84,5
3	Switzerland	83,6
4	Singapore	83,5
5	Italy	83,4
38	USA	78,9
40	Estonia	78,6
43	Poland	78,5
85	Belarus	74,6
98	Georgia	73,6
109	Russian Federation	72,4
114	Ukraine	72
115	Egypt	71,8
191	Central African Republic	52,8

Compiled by source [10].

In relation to the level of education index, the Ukrainian population belongs to the most well educated nations. The estimation level of education comes true on the basis of index of average duration of education in the country (table 5).

Table 5

Expected years of schooling (years) in Ukraine for 1990-2018

Ranking HDI (2018)	1990	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018
88	12,4	13,0	14,6	14,8	14,8	14,9	14,9	15,0	14,9	15,1	15,1	15,1

Compiled by source [4].

Access to knowledge is determined by the expected duration of studies - amount of years, as expected, the child can get from the entry to school, if some tendencies of population bringing during her/his life are kept to education. For period of 1990-2018 the average duration of studies in Ukraine grew on 2,7. By estimation rating of UNDP (in 2018) Ukraine according to the index of studies duration Ukraine occupied the 56th place from 189 countries of the world (table 6).

Table 6

Average length of study in some countries in 2017

Ranking (2017)	Country	Higher education (years)	Average length of study (years)
1	Australia	22,9	12,9
2	Belgium	19,8	11,8
3	Ireland	19,6	12,5
4	Iceland	19,3	12,4
5	Denmark	19,1	12,6
16	Germany	17	14,1
20	USA	16,5	13,4
24	Poland	16,4	12,3
32	Estonia	16,1	12,7
55	Georgia	15	12,8
56	Ukraine	15	11,3
188	Niger	5,4	2
189	South Sudan	4,9	4,8

Compiled by source [12].

After the index level of education in the world (Education Index 2019) Ukraine took the 46th place (0.797) among 189 countries. The greatest positions in rating have: Germany (0.946), Australia (0.923), New Zealand (0.923), Denmark (0.920), Norway (0.919), Iceland (0.918), Ireland (0.918), Great Britain (0.916), Finland (0.915), Sweden (0.914). The closest neighbor's of Ukraine in Index after 2018 are Luxemburg (0.802), Montenegro (0.797), Croatia (0.796) [9].

More detailed idea about the state of human capital of Ukrainian enterprises gives the Global human capital index (Global Human Capital Index, GHCI), that gives an estimation, both current and expected, human capital of the country, as an accumulation of skills does not end with formal education, and permanent application and accumulation of skills at work are part of human capital development. As marked in Lecture about human capital after 2017 the World economic forum (World Economic Forum), «very often economies own necessary talent, but can not use» it [21, p. 5]. Conducting the analysis of level of human capital development the World economic forum (World Economic Forum) applies human capital index (Human Capital Index), at determination of that constituents, that, in particular, characterize life duration, are taken into account, even education in the country, professional training, employment and others like that.

After the of human capital index (HCI) Ukraine in 2015 occupied the 31st position among 124 countries of the world by estimation rating of human capital development, in 2016 it had the 26th place among 130 countries of the world, in 2017 it had the 24th place among 130 countries of the world, as marked, the efficiency indexes of Ukraine are especially high to the level of GDP per capita. [21, p. 13]. Besides, only 25 countries of the world use 70% of human capital or even anymore, including Ukraine –70,28.

It is needed to pay attention, that after the sub-index of mental abilities (competences) estimation (Capacity of score), the personnel reserve is estimated, are people that have the formally accredited qualifications according to the main base of skills and got qualifications on more various brief-case of specializations, Ukraine took the 5 place (from 130 countries) in 2017 - 81,7 points. After the estimation sub-index of «Now-how» (Know-how score), that

determines the potential for creation of effective cycle of possibilities for new skills acquisition in the workplace and motivation of investments in development of highly skilled personnel among private and state representatives, and also among people, Ukraine took only the 38th place (59,3 points) [21, p. 8].

This situation directly influences on the competitiveness of the Ukrainian enterprises, that in the conditions of rapid technological changes acquires priority. Thus, on the estimations of the World economic forum after the global competitiveness index (Global Competitiveness Index, GCI), that consists of 113 variables that, in turn, incorporated in 12 control indexes, in particular innovative potential; the level of technological development; efficiency of labour-market; competitiveness of companies; health, primary education; Higher education, professional training and others like that, Ukraine for the period of 2014 (76 place among 144) on 2019 (85 place among 141) has a tendency to worsening the indexes (table 7).

Table 7

Positions of Ukraine and some countries in the Global Competitiveness Index 2010-2019

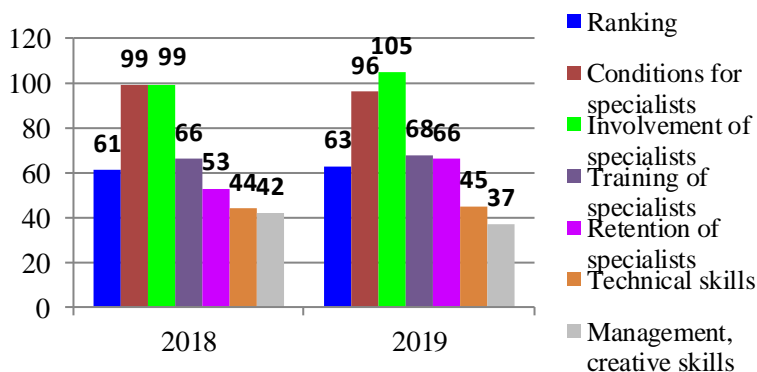
Ranking GCI	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Ukraine	89	82	73	84	76	79	85	81	83	85
Georgia	93	88	77	72	69	66	59	67	66	74
Turkey	61	59	43	44	45	51	55	53	61	61
Romania	67	77	78	76	59	53	62	68	52	51
Russia	63	66	67	64	53	45	43	38	43	43
Poland	39	41	41	42	43	41	36	39	37	37
Estonia	33	33	34	32	29	30	30	29	32	31

Compiled by source [20].

From 2018 the World Bank for realization of measuring and analytical work with the aim of increase of awareness level and demand on items in relation to human capital forming and of human capital index (Human Capital Index, HCI) was worked out, measures the productivity level of next generation's workers as compared to

the standard index of complete course of studies and valuable health. The index value is for the country in that the average worker has valuable health and has passed the complete course of education that is equal to 1. On this index Ukraine in 2018 was on the 50th position (0,65) among 157 countries [22, p. 62].

About the state of human capital of the Ukrainian enterprises testifies the highly sought of highly skilled specialists in the country. The data, given to the report about the state of highly skilled market in the world, that is annually published by the French experience institute of INSEAD together with Adecco Group and Institute of leadership in the sphere of human capital (HCLI). The global talent competitiveness index (Global Talent Competitiveness Index) measures, how countries are able to compete for the most skilled and talented employees. In addition, countries are estimated by the ability to prepare and keep the most talented specialists. On this index Ukraine occupied in 2018 the 61st place among 119 countries, in 2019 it ws the 63rd among 125 countries. For the estimation of Global Talent Index (GTI) seven independent indexes were used by every country: demography; quality of obligatory education system; quality of studies in universities and business-schools; quality of environment for skilled personnels training; mobility and relative openness of labour market; tendencies in providing of foreign investments and international specialists. The estimation of Ukrainian GTI indexes in rating of countries by the level of highly skilled personnel is given in picture 2.



*Fig. 2. Position of Ukraine in terms of highly qualified personnel
Compiled by source [16; 17].*

4. Conclusions

As technological spreads are opened out, enterprises are trying to use new technologies for the achievement of higher levels of production efficiency and consumption, going into new markets and for new products competition, the necessity of the use of digital technologies are growing. However, to use new technological possibilities to the enterprises it is necessary to work out people strategy that is ready to decide the task of new era of technological changes and innovations. This is especially important, because between new technologies and personnel training there is effective intercommunication. Introduction of new technologies assists business increase, creation of new workplaces and expansion of existent workplaces, on condition that he/she can completely use the talents of motivated and flexible labour force, that has skills oriented to the future, to get new possibilities due to the continuous retraining and qualification training. And vice versa, spreads in skills, both among workers and among the top management of the enterprise, can considerably complicate introduction of new technologies.

The modern state of human capital of the Ukrainian enterprises cannot be simply estimated. Without regard to the improvement of some quality descriptions related to the educational level of population, there are some processes in a country, that destroyed it. As depopulation combines with the considerable worsening of population's health and other its quality descriptions, there were some conditions in Ukraine for transformation of demographic crisis onto demographic catastrophe, that results in instability of community development, negatively influences on economy and social transformations, predetermining the physical, intellectual and spiritual decline of society, results in the lack of skilled human capital in all industries of economy.

For the change of situation and progress of human capital trends purposeful efforts of the enterprises, society and state are needed on the basis of scientifically reasonable understanding of problems essence and facilities of their permission.

The prospect of further researches in this direction is determination of prospects of human capital development of the enterprises in the conditions of employment patterns change, skills instability caused by technological changes.

References

1. Gross Domestic Product: Financial Portal of the Ministry of Finance. URL: <http://index.minfin.com.ua/index/gdp/>.
2. Grishnova O. (2001) Human capital: formation in the system of education and vocational training. Kyiv: Knowledge Company, KOO, 254 p.
3. Grayson Jackson K. Jr., O'Dell Carl. (1991) American Management at the Threshold of the 21st Century. Moscow: Economics, 320 p.
4. Data on human development (1990-2018). UNDP: Human Development Reports: Website. URL: <http://hdr.undp.org/en/data>. (accessed 03.26.2020).
5. State Statistics Service of Ukraine: website. URL: <http://www.ukrstat.gov.ua/>. (accessed 03.26.2020).
6. Human Development Indices and Indicators: Updated Statistical Data 2018: UNDP Human Development Report, 2018 / Report. 111 p. URL: http://hdr.undp.org/sites/default/files/2018_human_development_statistical_update_ru.pdf (accessed 09.15.2019).
7. Kravchenko NV, Kovalchuk TM Social investments: essence and role in formation of resource-competence base of the enterprise. Global and national problems of economy. 2017. № 15. URL: <http://global-national.in.ua/issue-15-2017>. (accessed 03.27.2020).
8. United Nations Development Program: Human Development Report 2016 URL: <http://hdr.undp.org/en/2016-report>. (accessed 03.27.2020).
9. Rating of the countries of the world by level of education Humanitarian Encyclopedia: Research. Humanitarian Technology Center: Website. URL: <https://gtmarket.ru/ratings/education-index/education-index-info> (accessed 27.03.2020).
10. Rating of the countries of the world in terms of life expectancy. Humanitarian Encyclopedia: Research. Humanitarian Technology Center: Website. URL: <http://gtmarket.ru/ratings/life-expectancy-index/life-expectancy-index-info> (accessed 03.23.2020).
11. Rating of countries by GDP per capita. NoNews: Website. URL: <https://nonews.co/directory/lists/countries/gdp-per-capita> (accessed: 03.22.2020).

12. Ranking of countries by length of study: 2018. NoNews: Website. URL: <https://nonews.co/directory/lists/countries/years-schooling> (accessed: 03.22.2020).

13. Fertility, mortality and average life expectancy tables for 2018: statistical compilation / State Statistics Service of Ukraine. Kyiv, 2019. 66 p. URL: http://ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/08/zb_tabl_nar_2018.pdf. (accessed 03.27.2020).

14. Human Development Report 1990. Concept and Measurement of Human Development / UNDP. New York, 1991. 189 URL: http://hdr.undp.org/sites/default/files/reports/219/hdr_1990_en_complete_nostats.pdf (accessed 10.08.2019).

15. Human Development Report 2019. Beyond Income, Beyond Averages, Beyond Today: Inequalities in Human Development in the 21st Century / United Nations Development Program One United Nations Plaza. New York, NY 10017. 366 pp. URL: <http://hdr.undp.org/sites/default/files/hdr2019.pdf>. (accessed 04.02.2020).

16. INSEAD (2018): The Global Talent Competitiveness Index 2018. Fontainebleau, France. 357 URL: <https://nonews.co/wp-content/uploads/2018/10/GTCI2018.pdf>. (accessed 03.21.2020).

17. INSEAD (2019): The Global Talent Competitiveness Index 2019. Fontainebleau, France. 338 URL: <https://nonews.co/wp-content/uploads/2019/06/GTCI2019.pdf>. (accessed 04.02.2020).

18. International Monetary Fund, World Economic Outlook Database. URL: https://www.imf.org/external/pubs/ft/weo/2018/01/weodata/weorept.aspx?pr.x=77&pr.y=19&sy=1992&ey=2021&scsm=1&ssd=1&sort=country&ds=. & br = 1 & c = 926 & s = NGDP_RPCH%2CNGDP%2CNGDPD%2CPPPGDP & grp = 0 & a = (accessed 03.25.2020).

19. Tertychna L. I. (2015) Human capital asset management as a component of company management. *Socio-economic aspects of economics and management: A collection of scientific articles*. Vol. 1. Aspect Publishing of the Budget Printing Center, Taunton, MA 02780, United States of America, P. 251-256.

20. The Global Competitiveness Report /World Economic Forum.
URL: <https://www.weforum.org/reports/the-global-competitiveness-report>. (accessed 03.30.2020).

21. The Global Human Capital Report 2017: Preparing People for the Future of Work. Insight Report / World Economic Forum, Committed to improving the state of the world. Geneva, Switzerland, 2017. 203 URL: <https://www.weforum.org/reports/the-global-human-capital-report-2017>. (accessed 03.30.2020).

22. World Development Report 2019: The Changing Nature of Work. International Bank for Reconstruction and Development / The World Bank. 2019. 151 URL: <https://www.worldbank.org/en/publication/wdr2019>. (accessed 04.02.2020).