

HUMAN CAPITAL FORMATION IN UKRAINE

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Abstract. In their work, the authors will focus on what can be done to improve the process of human capital formation in Ukraine in the long-term and on Ukraine and EU cooperation opportunities in this direction. As to the authors point of view the process of human capital formation consists of such parts as: 1) demographic processes and health safety management; 2) education and occupational guidance management; 3) personnel training and allocation management. They will present both the state, regional and corporate levels of human capital formation on the basis of human potential development with practical examples and current statistical information.

Keywords: human capital, formation, state, region, corporation.

Jel classification: J24

1. Introduction

In Ukraine during the years of transition to a market, a whole range of socially dangerous phenomena that adversely affects the formation of human resources that define human capital, namely the deterioration of living standards, increase the absolute differentiation of its revenues, lower investment in people, etc., which generates negative background to economic reforms and acts as a powerful social stimulus. Differences in levels of income per capita were formed under the influence of existing for decades' practice of central planning salaries, pensions, scholarships and aid. However, the increasing growth of incomes of regions depends on the activities of enterprises operating in the area, as well as carried out by regional authorities' policies in employment, incomes and prices.

The purpose of this paper is to offer a few guidelines for ensuring favorable conditions for further human capital formation in Ukraine. The objective is to present the current state of human capital formation process in Ukraine.

We begin the work with a brief look at the human capital and human potential theory as human capital is the result of human potential transformation. We then examine the national, regional and corporate levels of human capital formation in Ukraine. Finally, we close the paper with a brief assessment of human capital formation problems and propose possible ways of their solution in the long-term.

2. Human capital theory

Scientific researches in the field of human capital problems were made by such famous scientists as Becker (1993), Schultz (1971), Denison (1974; 1979), Grishnova (2001), Ilyinsky (1996) etc.

Grishnova (2001) understands human capital as an economic category that describes a set of generated and developed as a result of investment of productive abilities, personal traits and motivations of individuals who are in their property, used in economic activity, promote productivity growth and thus affect the growth of its owner income and the national income.

Mikhailova (2003) considers human capital as an assessment of the potential ability of individuals to generate income. Applying this approach we can describe human capital as the ability to more efficient production of higher quality products due to higher labor productivity.

However, there is no consensus of economists in matters of importance of human capital components. Thus, Becker (1992), Nobel laureate in economics for significant contribution to the popularization of human capital ideas, offers to allocate human capital in education capital, health capital, training capital, migration capital and ownership of cost meaningful information, and motivation for economic activity (Becker 1993). In turn, I.V. Ilyinsky proposes to allocate human capital in education, health and culture (Ilyinsky 1996).

Tadeusz Listwan (2006), the Polish economist, describes human capital as combination of intellectual, personal, health and motivation fea-

tures as well as competences which help workers to develop them and the organization to develop and function. We should admit that this scientist describes an enterprise level of human capital, but he also allocates human capital in the similar components as the scientists mentioned above.

Sir William Petty (2008), the founder of classical economics, was one of the first who used human capital concept in 1676 comparing the loss of weapons and military communications with the loss of human life. Centuries later, Adam Smith, the founder of modern economic theory, in 1776 drew attention in his famous treatise "Inquiry into the nature and causes of the wealth of nations" that the welfare of the people is determined mainly by the number of workers and their skills (Smith 1977). A century later the English economist, the author of „The Economics of Industry“, Alfred Marshall *et al.* (2010) noted long-term nature of investments in human capital and the role of the individual in this process.

After the definition of human capital theory significant changes were made in the concept of national wealth, because it got a wider interpretation. Along with real elements of capital (the value of land, buildings, structures, equipment, and inventory) financial assets, materialized knowledge and ability of people to productive work were included to the national wealth. The accumulated scientific knowledge, particularly, materialized in new technologies, investments in health are now considered as intangible elements of national wealth (Rykovska 2005).

In 1998, the World Bank estimated the cost of national wealth in 192 countries on three main components: human capital, natural capital, physical capital (accumulated material and proprietary funds). In their observations the experts assumed that much of consumer spending (current expenditures of families for food, clothing, housing, education, health, culture, and the costs of the state for these purposes) are used to reproduce human capital and its accumulation. According to these calculations, human capital is 64 %, natural – 20 %, and physical – 16 %. Human capital advantages over the material and physical capital especially appears in the countries with high income, namely in Germany, Switzerland, Japan, its share is on average 80 % (Zhavoronkova 2007).

Thus, research and knowledge of level, structure and development of human capital stocks in the national economy is now necessary for raising and resolving a number of general economic problems and make macroeconomic decisions. Taking into consideration the techniques of Western economists, Ukraine needs to develop its own model of formation and development of human

capital as a social and economic growth factor for the national economy.

3. Human potential theory

Thus, the performance assessment of natural, social, scientific and technological changes in people's life requires the development of the category of "human potential".

In our opinion, the human potential of the enterprises is a specific set of high quality and some quantitative characteristics of employees that are to be realized in the process of labor and increase its effectiveness (Shkoda *et al.* 2011). The result of this transformation is human capital.

On the basis of this definition, the human potential of the enterprise, we can say that human potential can be equated to labor potential only partially, and we can not identify them because human potential is more complex term, which however includes labor potential.

Indeed, in a more expanded sense human potential is equal to labor potential. Labor potential is defined as a complex combination of physical properties, knowledge, experience, spiritual and moral values, cultural facilities, customs and traditions of the country's population.

According to Shchelkunov (1999), "labor potential is the number, demographic composition, educational level and qualification of personnel". This definition also describes a set of qualitative and quantitative components.

Onikiyenko *et al.* (1986) proposed noteworthy approach to labor potential. He defined that "labor potential" is a territorial aggregate of working population, which has relevant vocational and training qualification, and has a definite place of work in the national economy considering their level of technological and technical equipment. However, we emphasize that this definition relates primarily to macro-level.

Thus, labor potential includes a set of different qualities that characterize its performance. These qualities associated:

1. with the ability of an employee to work, his health, stamina, type of nervous system, that is all that reflects the physical and psychological potential;
2. with the volume of general and specific knowledge, abilities and skills that determine the ability to a certain qualification work;
3. with the level of responsibility, social maturity, needs and interests.
4. At the level of society labor potential is defined as the derivative of the three variables:
5. the number of population at a given time in the employable age;

6. the number of regulated time for the production purposes during the day, week, month, year, human life;
7. socially necessary intensity of employment within regulated time.

It should be noted that employment potential is the main source of enterprise personnel. Therefore it is appropriate to call the enterprise labor potential – personnel potential, which owns the integrity property. This fundamentally distinguishes it from the properties inherent to each worker individually.

Thus, we think that it is appropriate to equal the enterprises labor potential and personnel potential. However, the notion of labor potential is more limited than human potential. And human potential includes labor potential. That's why human capital is a realized, active part of human potential.

The problem of human potential is a problem of perspective, assessing the possibilities of human development and management.

The concept of human potential development requires solving the following tasks:

1. provision of safety (task of human potential keeping and reproducing);
2. development of infrastructure subsystem projects (task of human potential development);
3. development of cultural-psychologic programs (task of providing development of society human potential).

4. Current state of human capital formation

The scientific-technological revolution, especially its information component, removes the problem of human potential realization and human capital accumulation to a new level. And those areas of life that contribute to human capital formation should be identified as priority in strategic planning. First and foremost it is education, training and retraining of personnel; science, including the costs of research and development; innovation sector, including costs of technological innovation, stimulation of innovation and creation of intellectual property; health, including the costs of environmental and physical culture, and finally, the culture in the broadest sense.

4.1. National level

Human capital formation is a part of conceptual scheme of human capital management system presented at Fig.1. In turn, human capital management is a part of the state socio-economic policy in general, governing bodies' socio-economic policy

at the regional level and corporate policy of businesses in particular.

Ukraine's economy in a globalized poorly withstand the competition: in 2009–2010 index of international competitiveness, based on research conducted by the World Economic Forum, a low – 3.95 points in comparison 4.05 points in 2008 – 2009. This are predetermined downgrade – from 72 (2008–2009) to 82 places (2009–2010) (Drzenik Hanour *et al.* 2008; Abbasova *et al.* 2010).

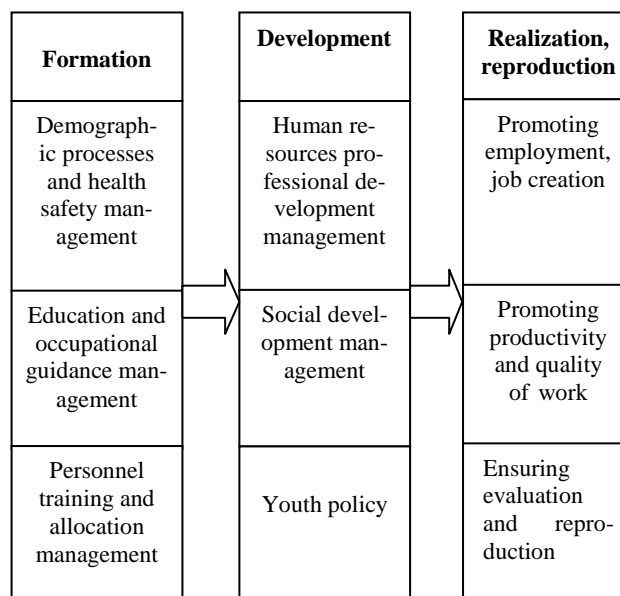


Fig. 1. Conceptual scheme of human capital management system (Source: Zhavoronkova *et al.* 2010)

Ukraine is much lower than developed countries and by the level of human capital: the importance of the human development index, used the United Nations Organization to characterize the quality of life in different countries, has allowed Ukraine to include grades' average level of development (0.5 – 0.8) and take into 76 in 2011 (UNDP 2011).

4.2. Regional level

Based on the analysis of indicators of human development in Ukraine five groups of regions with differences in the state of human development are distinguished (Table 1). The main reasons for low values of human development index are a short life duration, too low cover complete secondary education and high levels of contamination. The best indicators provide higher levels of education, income and health indicators.

Contents of regional human resources management are to solve the following problems (Chvertko 2005):

1. creating conditions for citizens to realize the right to work;

2. providing equal opportunities to choose the kind of work;
3. developing and implementing programs for training and retraining;
4. creating healthy and safe working conditions;
5. establishing optimal proportions in the distribution of labor between sectors of territorial economic complex;
6. balancing regional labor market, the number of labor resources and jobs;
7. social protection of uncompetitive population.

Table 1. Regional features of human development in Ukraine, 2010 (Source: Regional Human Development 2011)

Human development index	Region of Ukraine (province, autonomous republic, Kyiv, Sevastopol)
0.409–0.459	Vinnytska, Donetska, Zhytomyrska, Kirovogradska, Luganska, Odeska, Sumska
0.460–0.486	Volynska, Dnipropetrovska, Zaporizka, Lvivska, Mykolaivska, Rivnenska, Ternopilska, Khersonska, Cherkaska, Chernivetska, Chernigivska
0.487–0.514	AR Crimea, Zakarpatska, Ivano-Frankivska, Poltavska
0.515–0.541	Kyivska, Khmelnytska,
0.542–0.698	Kharkivska, Kyiv, Sevastopol

4.3. Corporate level

As to the authors' point of view, the following factors are typical for human capital formation in Ukraine at the corporate level (Table 2).

For example, analysis of aviation personnel in Ukraine according to age group showed that over 25 % of flying pilots are over 53–55 years (Zhavoronkova *et al.* 2009). As you can see, there is a long break between the changes of personnel, the gap in the vital process of transfer of knowledge and experience from older to younger. In this regard, regular aviation companies are forced to employ flight or engineering staff, which does not meet the level of qualification, conduct training and retraining of these specialists. Such situation adversely affects the financial performance of aviation companies, and is dangerous for passengers and the entire transport system of Ukraine.

Thus, we can see that aviation companies in Ukraine have to pay more attention to the factors of human capital formation, especially to demographic, socio-demographic groups of factors.

Table 2. Factors that impact on human capital formation and realization in Ukraine at the corporate level (Source: Zhavoronkova *et al.* 2010)

Group of factors	Components of factor
Social-economic	Level of general education and professional training of the population and corporation personnel Health status and culture of the population System of corporate work stimulation State and corporation social infrastructure level of development Level of corporation technical and economic development
Economic	Nominal and real incomes Income distribution by population groups Availability of goods and services Inflation in the country Credit and financial mechanism of the country Tax system of the country Territorial distribution of productive forces Level of specialization and cooperation of production Development level of state foreign economic relations in general and businesses foreign economic relations in particular
Demographic	Number of population in the country Gender and age structure of population Rate of natural population growth Average life duration Migration mobility of population
Socio-demographic	The number of economically active population Distribution of population by industries and by economic sectors The number of employed and unemployed population, its administrative and territorial division Duration of working period of life
Legal	Corporation legal framework Social-labor relations between employer and employees Rules of conduct within the corporation
Ecologic	The overall ecological condition of the country The quality of drinking water and food Natural and climatic conditions of the corporation territory location Hygiene and sanitary conditions of work Recreational resources of the territory

But at the corporate level the improvement of human capital formation system depends largely on the enterprise management attitude to personnel training. Thus, according to the Research of Open

Business School, only 23 % of managers are committed to personnel training and development, 67 % - support it and 10 % - ignore (OBS 2007).

We can see that all levels of human capital formation in Ukraine are united with each other. And we need to search human capital formation problems in Ukraine.

5. Human capital formation problems

The development and implementation of employment programs in regional programs of economic and social development is quite important and necessary. Such programs should be developed not for one year, as it is today, and included in the strategic plan. Perspectives of the labor market at the regional level are based on projected balances.

The importance of area-based approach to solving problems of the labor market is generally recognized. Regularities of the national labor market set general and specific trends in the dynamics of the main features of regional and local labor markets.

Development and implementation of measures for tackling the crisis in the economy must be made so that the social problems solution of Ukraine's population positively affects the demographic situation. Since any direction of social policy directly or indirectly affects the reproduction of the population, demographic problems must be solved by strengthening the demographic focus and increase the efficiency of the demographic social and economic activities in all spheres of society's life, especially in the sphere of labor. We agree with the suggestion of Chvertko (2005) on rehabilitation measures for improving demographic situation:

1. continuous improvement of credit system for demographic purposes depending on the number of children born with expanding the range of credit not only to purchase housing and durable items, but also for professional education, health care, a possible period of unemployment, self-employment, family development cooperation, the start-up;
2. development and implementation of taxation on preferential and differentiated (to compensate benefits) basis, namely: a) families - depending on the number of children and level of provision; b) enterprises - depending on the activity of social programs; c) regions - depending on the demographic situation, on the situation in the labor market, etc.;
3. return to the scholarship of such demographic policy measures as a tax on childlessness, abortion restrictions, special medical duty on tobacco and alcohol;
4. development of a regional target program that

goes with the regional family standard „2 + 3” (couple and three children).

Important indicator of social welfare is the level of remuneration. For evaluating the use of human capital the rate of payment is applicable. However, comparison of wages by sectors of the economy determines, albeit indirectly, the level, the value and specificity of their human capital. In a market economy wages reflect the value of human capital.

Along with the devaluation of labor in Ukraine there was a significant reduction in real wages compared to productivity and GDP. In the nineties of last century, labor productivity has decreased in 1.44 times, and real wages in 3.8 times, ie the rate of wages decline was higher than the rate of labor productivity decline in 2.6 times (Pavlovska 2002). Average monthly wages in January-March 2012 compared with the corresponding period in 2011 (941.00 UAH) (Minimal salary in Ukraine in 2011) increased by 14.02 % reaching 1073.00 UAH per month, that is by 6.5 % higher than the subsistence minimum established for employable person in Ukraine –1017 UAH (Minimal salary in Ukraine in 2012).

However, the results achieved in the field of labor income, as noted scientist and economist Kolot *et al.* (2005) should not be overestimated. Ukraine is far behind the European social standards, and for a number of areas there is continuing growth of the negative trends that lead to the appropriate consequences.

We must take into account that the decline in previous years was so deep and deformation in revenue so essential that there is an urgent need for change comparison database and assessment criteria. It should be social standards - national, all-European; indicators of changes in quality of life, human development etc.

Decent average wages by European standards should be not less than 5–6 living wages. In Ukraine, the ratio of average wages in January–March 2012 and the minimum subsistence level for able-bodied person (1017 UAH) is 1.06:1, we see an equalization of these indicators. However, we need a new ideology of wage formation in order to meet European standards of living.

Today the share of wages in income of the population is less than a half. Available income includes wages, profit, mixed income, social assistance and others.

Poverty of the population in general and poverty of the economically active population in particular creates constraints for the economic development that is multifaceted, with risky consequences and those that literally threaten the economic security of the country. A significant conse-

quence of poverty is the deterioration of quantitative and qualitative parameters of human resources, which adversely affects the fertility of the nation, opportunities to gain quality education (Table 3), motivation to work and social activity of the population.

Table 3. Differences in Inaccessibility of Professional Education by Settlement Size, 2007 (%) (Source: Population of Ukraine: Socio-Demographic Problems of Ukrainian Village 2007; Koroleva 2010)

	All	Distribution by settlement size of households unable to obtain professional education	Risk of impossibility of obtaining professional education owing to lack of funds, compared with average
Big city	43.3	30.9	71.7
Small town	25.9	23.7	91.5
Village	30.8	45.4	146.5
Total	100.0	100.0	100.0

The top-priority measures of employment policies and improvement in the labor market are:

1. promoting the attraction of direct investment in the region economy;
2. refusal to provide subsidies to employers to create additional jobs at the expense of the fund of compulsory state social unemployment insurance;
3. initiating creation of a special focal point for the implementation of quick response and strategic planning.

In modern times the educational determinant of human capital growth is a factor of competitiveness in the labor market and economic growth, ensuring social and economic welfare of the state and increasing personal income. Indeed, the level of education affects the duration of employment, indicates the magnitude of financial income, affect the possibility of professional self-improvement.

Education is a form of value-normative basis reproduction, the main social institution that regulates the individual's life, transmission of knowledge. Thus, the listed factors are difficult to monetary terms, but they have social orientation, and effectiveness of education is directly proportional to the improvement of life quality and is inversely proportional to the spiritual impoverishment and crime rates in the country. Socio-economic changes in Ukraine led to the transformation of the professional segment of the educational system, which showed itself in the emergence of new types and forms of education, in the improvement of the

technological support of the educational process and so on.

Today it is impossible for 5–6 years to prepare people for professional activity in a lifetime, as 5 % of theoretical knowledge and 20 % of professional knowledge are updated each year. For example, the adopted in the USA unit of measurement of aging of specialist new knowledge, so-called “half-life of competence” (a period of declining competence at 50 %) as a result of new information shows that this threshold for many occupations occurs in less than five years (Fedulova 2009). It is possible to solve such problem only by using the concept of lifelong training at the state level, where each level of education will be a continuation of the previous one. Today this approach is growing in Ukraine.

The key principles of health care in accordance with the standards of the welfare state are:

1. legislative consolidation of the state full responsibility for the health of citizens and the formation of a unified public health policy;
2. assignment of the state guarantees program of free medical assistance provision to issues of joint jurisdiction, which allows the object of delegation of financial powers to implement on the basis of subsidiary liability;
3. development of general metrological approaches in the health care system formation;
4. account of the medical services market's demands and the state's role in its regulation;
5. legal framework for the coordination of national, regional, municipal and corporate level with the public health tasks realization;
6. intersectoral cooperation of state, municipal and private organizations related to public health, creation of inter-industry commission;
7. development of local strategies (realization of Cities Health projects);
8. creation of conditions to support personal health by citizens.

Ukraine has declared its goals of building a socially oriented market economy that puts sustainable human development at the core of state social policy and makes it a measure of the country's economic and social progress.

To achieve these objectives, Ukrainian society should unite around ideals of human development and progress. The European Parliament in 2005 passed almost unanimously a motion asserting the wish of the European Union (EU) to establish closer ties with Ukraine. The Association Agreement is currently under negotiation, with the aim of deepening Ukraine's political association and economic integration with the EU (UNDP in Ukraine 2011). Given the EU's extensive experience in implementing effective policies and pro-

grammes of social inclusion, improved collaboration in this area can help Ukraine.

6. Conclusions

So, in order to ensure favorable conditions for further human development and human capital formation in Ukraine, it is necessary to:

1. form a new philosophy of aiming at the formation, development and reproduction of the state human capital;
2. support the implementation of new technologies on large industrial enterprises;
3. stimulate further development of all forms of business through their functioning in the relationship and interdependence;
4. establish institutional mechanisms of functioning and adaptation of the labor market, aimed at employment restructuring, movement of labor from non-effective activities in promising sectors of the economy;
5. improve the tariff regulation of wages in the Ukrainian enterprises through the use of a single flexible tariff system;
6. Improve work standardizing to existing norms of labor costs to fully comply function of labor measure.

To improve the conditions of human potential realization at national, regional and corporate levels it is required a balanced policy of the executive authorities and local governments, which must be based on the priority of human development and human capital formation. And only when all the subjects of social partnership will unite around a common idea, it is possible to build a welfare state and civil society.

References

- Abbasova, L.; Gazizullin, I.; Musatov, D; Rubchenko, R. *The Ukraine Competitiveness Report 2010: Towards Sustained Growth and Prosperity*. Available from Internet: http://www.feg.org.ua/docs/Competitiveness_report_2010_en.pdf
- Becker, G. S. 1993. *Human Capital: a theoretical and empirical analysis, with special reference to education*. 3rd ed. Chicago: The University of Chicago Press. 389 p.
- Chvertko, L. A. 2005. *Labor potential of Eastern Podillia and Central Dnieper areas: demographic and labor-resource dimension: Summary of PhD Dissertation*. Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine. Kyiv. 20 p. In Ukrainian.
- Denison, E. 1974. *Accounting for United States Economic Growth, 1929-69*. Brookings Institution Press, 355 p.
- Denison, E. 1979. *Accounting for Slower Economic Growth: The United States in the 1970's*. Brookings Institution Press, 212 p.
- Drzenik, H. M.; Geiger, T. 2008. *Basic Points of Ukraine Competitive Capacity Report 2010: Towards economic growth and prosperity*. World Economic Forum Materials. Available from Internet: http://www.feg.org.ua/docs/final_ua.pdf
- Fedulova, L. I. 2009. *Knowledge Economics: textbook*. Institute for economics and forecasting of the National Academy of Sciences of Ukraine. Kyiv: Ekvpres. 600 p.
- Grishnova, O. A. 2001. *Human capital: formation in the system of education and professional development*. Kyiv: Znannia. 254 p. In Ukrainian.
- Ilyinsky, I. V. 1996. *Investments in future: education in the investment production*. Saint-Petersburg. 164 p.
- Population of Ukraine: Socio-Demographic Problems of Ukrainian Village. 2007. Kyiv: Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine.
- Kolot, A.; Grygorovych, S. 2005. Theoretical and applied aspects of raising workers incomes as a precondition for the preservation and development of human capital, *Ukraine: labor aspects* 48 (8): 19–27.
- Koroleva, E. 2010. Open Education as a Factor of Overcoming Social Exclusion, *A Human Being and Education* 2(23): 28–31.
- Listwan, T. 2006. *Zarządzanie kadrami (HR Management)*. Warszawa: Wydawnictwo C.H. Beck. 434 p.
- Marshall, A.; Marshall, M. P. (2010) [1879] *The Economics of Industry*. BiblioBazaar. Reprinted. 252 p. ISBN: 1141344327, 9781141344321.
- Minimal salary in Ukraine in 2011. Available from Internet: <http://jurisconsult.net.ua/spravochniki/382-rozmir-minimalnoyi-zarobitnoyi-plati-z.html>
- Minimal salary in Ukraine in 2012. State employment service of Ukraine. Available from Internet: <http://www.dcz.gov.ua/control/en/index>
- Mykhailova, L. 2003. *Economic foundations of human capital formation in agriculture: Monograph*. Sumy: Dovkillia. 326 p. In Ukrainian.
- Onikiyenko, V. V.; Libanova, E. M. 1986. Labour potential of Ukrainian SSR, program-target management, *Bulletin of Ukrainian SSR Academy of Sciences* 56 (1): 34–46.
- Petty, W. (2006) [1676]. *Essays on Mankind and Political Arithmetic*. Echo Library. Reprinted. 76 p. ISBN 1406830674, 9781406830675.
- Pavlovska, N. 2002. The need and ways to ensure accelerated growth of wages, *Ukraine: labor aspects* 18(2): 11.
- Regional Human Development. Statistical Bulletin. 2011. Kyiv: State Statistics Service of Ukraine. 43p.
- OBS. *Training and Development – 2007*. Research of Open Business School. Available from Internet: http://www.obs.ru/hrm/survey/obs_learnig_and_development_2007.pdf

- Rykovska, O. V. (Риковська, О.В.). 2005. Evolution of methodology for the assessment of human capital as a factor in economic growth (Еволюція методології оцінки людського капіталу як чинник економічного зростання). *The international Scientific Theoretical Conference "Methodological foundations of contemporary research in agricultural economics"*. Selected papers. Zhytomyr: State Agroecological University, 2005, 68–71.
- Shchelkunov V. I. 1999. *Production potential of Ukraine: strategy of formation and use*. Kyiv: Naukova dumka. 238 p.
- Shkoda, T.; Padalko, Y. 2011. Key points of enterprise human potential, *Problems of infrastructure performance rising* [Collection of scientific articles] 30: 184–189.
- Schultz, T. W. 1971. *Investment in human capital: the role of education and of research*. Free Press. 272 p.
- Smith, A. 1977. [1776]. *An Inquiry into the Nature and Causes of the Wealth of Nations*. University Of Chicago Press. 1152 p. ISBN 0226763749.
- UNDP. *Human Development Report 2011. Sustainability and Equity: A Better Future for All*. The UNDP Human Development Report Office. Available from Internet: http://www.undp.org.ua/files/en_58260HDR_2011_EN_Complete.pdf
- UNDP in Ukraine. *National Human Development Report 2011. Ukraine: Towards Social Inclusion*. Available from Internet: http://www.undp.org.ua/files/en_95644NHDR_2011_eng.pdf
- Zhavoronkova, G. V. 2007. Features of work motivation of personnel engaged in intellectual activity. *Economics, Business and Management* 8(4): 51–58.
- Zhavoronkova, G. V.; Degtiar, N. V. (Жаворонкова, Г.В.; Дегтяр, Н.В.). 2009. HR problems of enterprises in aviation industry (Проблеми управління персоналом підприємств авіаційної галузі). *The 9th international Scientific Practical Conference "AVIA-2009"*. Selected papers. Kyiv: National Aviation University, 2009, 23.22–23.25.
- Zhavoronkova, G. V.; Shkoda, T. N. (Жаворонкова, Г.В.; Шкода, Т.Н.). 2010. HR Management as Human Capital Management of Corporation (Управління персоналом як людським капіталом корпорації). *Corporate Management in Ukraine: Intellectual Capital, Human Resources, Quality: Collective work*. Kyiv: Naukova dumka, 2010, 195–275.