



e-ISSN 3083-6018

SOCIAL DEVELOPMENT: Economic and Legal Issues

<https://www.eu-scientists.com/index.php/sdel>



Systemic Contradictions in the Formation and Use of Human Capital in the Conditions of the Transformational Economy of Ukraine

Serhii Duha  ¹ *

¹ *Simon Kuznets Kharkiv National University of Economics (Ukraine). PhD Student at the Department of Finance and Credit.*

* *Corresponding Author*, e-mail: duha.serhii@hneu.net

ARTICLE INFO

ABSTRACT

Research Article

DOI:

[10.70651/3083-6018/2025.11.08](https://doi.org/10.70651/3083-6018/2025.11.08)

Copyright © 2025
by author



This is an open access journal and all published articles are licensed under a Creative Commons Attribution—NonCommercial 4.0 International (CC BY-NC 4.0)



The article investigates theoretical, methodological, and applied problems of human capital development in Ukraine. The relevance of the topic is due to the dissonance between the high educational level of the population and low indicators of labor productivity and quality of life. The aim of the work is to identify systemic obstacles that make it impossible to transform the existing labor potential into real human capital and to substantiate the need to change the paradigm of labor resources management. Based on a systemic analysis of demographic processes, the state of the educational services market, and the labor market situation, it is proven that in Ukraine, human capital exists mainly as a potential opportunity, not as a functioning asset. A deep theoretical demarcation of the concepts of “labor potential”, “labor force”, and “human capital” is carried out. It is determined that the category of “human capital” is not just a metaphor, but an economic asset that requires investment and must generate income. Disproportions in education and the phenomenon of “over-education” are analyzed, as well as the impact of low wages, which do not cover the equivalent of the cost of labor force (ECLF), on the reproduction of human capital. The impact of the demographic crisis and indicators of the nation’s health on the efficiency of social investments is investigated. It is substantiated that the capitalization of knowledge is impossible without the forced modernization of the national economy and a transition from a raw material-based model to an innovation-driven one. The lack of such conditions results in the depreciation of educational potential, its obsolescence, and the outflow of skilled personnel. It is proposed to view a high quality of life not merely as a consequence, but as a fundamental prerequisite for the effective formation of human capital.

KEYWORDS

human capital, labor potential, quality of life, modernization, demographic crisis, equivalent of the cost of labor force, labor market, social investment.




e-ISSN 3083-6018

СОЦІАЛЬНИЙ РОЗВИТОК: економіко-правові проблеми

<https://www.eu-scientists.com/index.php/sdel>




Системні суперечності формування та використання людського капіталу в умовах трансформаційної економіки України

Сергій Ю. Дуга  1 *

¹ Харківський національний економічний університет імені Семена Кузнеця (Україна). Аспірант кафедри фінансів і кредиту.

* Автор-кореспондент, e-mail: duha.serhii@hneu.net

СТАТТЯ	АНОТАЦІЯ
Дослідницька	У статті здійснено спробу комплексно дослідити теоретичні та прикладні проблеми розвитку людського капіталу в реаліях трансформаційної економіки України. Актуальність обраної теми зумовлена наявністю глибокого дисонансу між високим рівнем освіченості населення та вкрай низькими показниками продуктивності праці й якості життя. Основною метою дослідження є виявлення системних бар'єрів, які блокують перетворення наявного трудового потенціалу на реально діючий капітал, а також обґрунтування необхідності зміни парадигми управління трудовими ресурсами. Базуючись на аналітичних даних Державної служби статистики, демографічних звітах та міжнародних рейтингах, доведено, що в Україні людський капітал існує переважно як потенційна можливість, а не як функціонуючий актив. Проведено глибоку теоретичну демаркацію понять «трудова потенція», «робоча сила» та «людський капітал», визначено, що остання категорія є не просто метафорою, а економічним активом, що потребує інвестицій та має приносити дохід. Проаналізовано диспропорції в освіті та феномен «надлишкової освіти» (over-education), а також вплив низької заробітної плати, яка не покриває еквівалента вартості робочої сили (ЕВРС), на відтворення людського капіталу. Досліджено вплив демографічної кризи та показників здоров'я нації на ефективність соціальних інвестицій. Аргументовано, що капіталізація знань неможлива без форсованої модернізації національної економіки та переходу від сировинної моделі до інноваційної. Відсутність таких умов призводить до амортизації освітнього потенціалу, його морального старіння та відтоку кваліфікованих кадрів. Запропоновано розглядати високу якість життя не просто як наслідок, а як фундаментальну передумову ефективного формування людського капіталу.
DOI: 10.70651/3083-6018/2025.11.08	
Авторське право © 2025 автора	
	
Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	



КЛЮЧОВІ СЛОВА

людський капітал, трудова потенція, якість життя, модернізація, демографічна криза, еквівалент вартості робочої сили, ринок праці, соціальні інвестиції.

1. Introduction

The modern economy of Ukraine is characterized by a systemic contradiction: the leading positions of the state in the world rankings in terms of higher education coverage are not transformed into appropriate economic growth and approximation of living standards to the European level. Knowledge and professional skills, the formation of which requires significant investment resources (both public and private), do not find productive application. This actualizes the need for a critical rethinking of the category of “human capital” not as abstract wealth or a set of certified specialists, but as a real economic asset that should function in the market, bring income to its owner and create added value for the state.

The scientific problem lies in the gap between the accumulation of educational potential and the possibilities of its economic realization. In Ukraine, a mechanism of “idle” in the reproduction of human capital has been formed: investments in education are made, but due to the deformations of the labor market and the primitive structure of the economy, they are not capitalized, but turn into expenses without proper return.

2. Literature Review

The fundamental foundations of the theory of human capital are laid down in the works of Western classics, in particular G. Becker (1993) [3] and T. Schultz (1961; 1971) [18; 19]. They proved that investing in a person is no less important than investing in physical capital. However, the mechanical transfer of Western models to Ukrainian soil without taking into account the transformational specifics is erroneous.

Human resources play a strategic role in the development of the enterprise. They are a prerequisite for the successful functioning of the company and its further development [7]. In the context of the development of scientific and technological progress, human capital is the basis for the formation of economic systems and ensuring their competitiveness at the macroeconomic and microeconomic levels [20]. Sustainable development of the national economy is the central concept of modern public administration, aimed at ensuring a balanced interaction between economic growth, social justice and environmental sustainability [3].

In particular, O. Hrishnova (2001) [8] substantiates the investment essence of this category, distinguishing it from the concept of labor force. In turn, E. Libanova (2014) [11] focuses on the analysis of socio-demographic determinants, deeply exploring the impact of property inequality and poverty on the development of human potential. A. Chukhno et al. (2007) [6] consider human capital in the context of the transition to the information society, emphasizing the role of production. In turn, V. Antoniuk (2006) [1] and V. Mandybura (2009) [13] focused on the socio-economic dimension of the problem. The importance of innovative education as a key determinant of the development of labor potential in his works is also emphasized by V. Blyzniuk (2011) [8]. Scientists investigate the objective realities and specifics of the functioning of human capital in the conditions of the domestic economy. Despite the significant number of publications, there is a certain terminological uncertainty in domestic science. The concepts of “labor resources”, “labor potential” and “human capital” are often identified. A critical analysis conducted on the basis of the works of S. Melnychuk [15] and other researchers allows us to assert the need for a clear demarcation of these categories in order to build an effective state policy.

Modern scientific discourse has significantly expanded the understanding of human capital in the context of the latest challenges. In particular, M. Hitka et al. (2019) substantiate the role of knowledge as a sustainable competitive advantage [7]. The impact of digitalization on the development of human capital is studied in the work of I. Shevchenko et al. (2023) [20]. The issue of sustainable development and demographic stability in the context of the crisis is revealed in the works of O. Baula [2] and L. Bilorusets [4]. The importance of state regulation of innovation infrastructure is emphasized by A. Ilyina [9]. Studies of post-war recovery are of particular relevance: V. Sanduhei et al. (2025) consider human capital as a driver of competitiveness [17], and V. Zhuravel et al. (2023) focus on the social protection of Ukrainian migrants in the EU [22].

3. Problem Statement

In Ukraine, there is an established structural disproportion between the significant amount of accumulated educational potential of the population and the inability of the national economy to ensure its full-fledged economic conversion. The technological backwardness of the manufacturing sector, the lack of coordination between the training system and the needs of the labor market, the deepening of the demographic depression and the chronically low level of remuneration for labor make it impossible to transform knowledge and competencies into productive human capital. As a result, investments in education do not provide the expected economic returns, the scale of migration outflow increases and there is a devaluation of existing human potential. This actualizes the need to eliminate systemic institutional barriers and carry out a deep modernization of the economy aimed at increasing the demand for highly skilled labor.

4. Methods and Materials

The methodological tools of the work are based on a set of general scientific methods. In particular, the method of theoretical generalization made it possible to distinguish the essence of the concepts of "labor potential" and "human capital". With the help of system analysis, demographic and educational factors of capital formation have been studied. The processing of data from the State Statistics Service and international ratings by methods of statistical analysis made it possible to identify imbalances in the labor market, and comparative analysis was used to compare national standards of quality of life and remuneration with global trends.

5. Results and Discussion

1. Theoretical demarcation of categories: from "labor resources" to "human capital"

To understand the deep reasons for the inefficiency of the use of the human factor in Ukraine, it is necessary to clearly distinguish the basic economic categories.

The term "labor resources" is a legacy of the planned and administrative economy, where a person was considered a passive object of management, a resource available for distribution by the state. In a market economy, when citizens have the right to freely choose the type of activity, this term loses its relevance at the micro level, although it can be used for macroeconomic estimates of the working-age population.

"The category of 'labor force' should be understood as an integral set of physical and intellectual abilities of an individual, which are actualized in the production process. In a market economy, it takes the form of a commodity, the value of which (wages) must be sufficient for the full restoration of the employee's vitality and professional development". "Labor potential is an integral characteristic of the available labor opportunities of an individual or society. It accumulates professional abilities, educational level, physical condition (health) and motivational attitudes, as well as the conditions necessary for their implementation. This category acts as the foundation for the formation of human capital, but it is different from it, since it characterizes the opportunity, not the realized value".

"Human capital is a specific economic asset formed by investing in human development. It is an accumulated stock of health, knowledge, professional skills and motivations, the targeted use of which increases labor productivity and ensures the growth of income of its owner".

The fundamental difference is that knowledge and skills acquire the characteristics of capital only when they: (a) are alienated from simple consumption; (b) are involved in production (invested); (c) bring income that exceeds the ordinary cost of simple labor (receiving "rent" for knowledge).

In Ukraine, there is a situation where significant *labor potential* (educated people) is not converted into *human capital due to the* lack of economic conditions for obtaining income from this knowledge.

2. Demographic background and the crisis of reproduction

The foundation for the development of human capital is the demographic situation (demography), which in Ukraine is currently in a state of acute crisis. Since 1992, a steady trend towards depopulation has been recorded in the country, which directly narrows the base for the reproduction of labor resources. The analysis of demographic processes shows that the population decline occurs not only due to migration, but also due to negative natural growth, which is reflected in detail in the demographic

reports of the “Population of Ukraine” [16]. A critical destabilizing factor is the high premature mortality of men of working age, analyzed in the works of the Institute of Demography edited by E. Libanova [12]. The scale of human capital losses and structural changes in the labor market as a result of the war are visualized in detail in the reports of the Kyiv School of Economics [14] and UNDP analytical reports [21].

A critical destabilizing factor is the high premature mortality of men of working age (especially in the age cohort of 30–44 years), which significantly exceeds the average European indicators. Such a demographic trend makes it impossible to fully return on investments made by the family and the state at the stage of human capital formation (education and upbringing). Shortening the period of active economic life leads to “underdepreciation” of the human asset, turning investments in it into high-risk and low-effective ones.

The war in Ukraine has increased migration flows and further depleted the skilled workforce. Awareness of the factors influencing human capital development in this context is crucial for developing an effective strategy that will ensure economic sustainability and sustainable growth [6]. Labor migration is becoming a growing trend in the modern labor market. Labor migration has its positive aspects, such as the redistribution of the labor force and increasing the efficiency of the use of human capital. However, along with other aspects of the flexible labor market, labor migration can also pose a threat to the social protection of workers [22].

In addition, there is an aging of the nation, which increases the demographic burden on workers. Reducing the tax base narrows the state’s ability to finance education and healthcare, creating a vicious circle of degradation of human potential.

3. Disparities in education: The phenomenon of “educational inflation”

In parallel with the deepening of the demographic crisis, significant structural distortions in the educational sphere are recorded in Ukraine. The analysis of the data of the State Statistics Service demonstrates a steady trend towards an increase in the share of persons with complete higher education in the economically active population. However, this trend does not indicate an increase in the quality of human capital, but manifestations of “educational inflation” – the devaluation of formal qualifications.

Due to the stagnation of the real sector of the economy, in particular the light industry, the problems of which are investigated by T. Levkovska (2013) [10], the labor market demonstrates low absorption capacity, not creating sufficient demand for a significant number of graduates, primarily in the humanitarian and economic profiles. The consequence of this imbalance is the spread of the phenomenon of “over-education”, in which specialists with a master’s level of training are forced to take jobs in trade or the field of basic services, where their high qualifications remain unclaimed.

The consequence of this is:

1. Dequalification: Unused knowledge is quickly lost.
2. Depreciation of the diploma: Higher education is no longer a guarantee of a high income.
3. Cost inefficiency: Household and state resources are spent on training specialists who are not needed by the economy of the existing structure.

The education system functions independently of the labor market, focusing on the demand of entrants (“fashionable” specialties), and not on the needs of economic development. This exacerbates structural unemployment and the imbalance between labor supply and demand.

4. Economic realities: Labor cost and poverty problem

The key obstacle to the capitalization of knowledge is the primitive structure of the Ukrainian economy, where low-tech modes and raw material orientation prevail. Such sectors of the economy objectively do not need complex, high-quality human capital.

Human capital plays a key role in the formation of an innovative environment, which emphasizes the need to create favorable conditions for the training of highly qualified specialists and the development of technological entrepreneurship [9].

The most indicative indicator of the crisis is the level of wages. In Ukraine, the basic principle of labor force reproduction has been violated. The official minimum wage and subsistence minimum do not meet real needs.

The concept of “Labor Cost Equivalent” (EURRS) is introduced, which is calculated based on the real needs of households for extended reproduction (including child support, housing, recreation, and self-development). Calculations show that the average salary in Ukraine often does not cover even a simple EVRS, let alone an extended one.

This means that:

- Employees do not have free funds to invest in their own development (health, additional education).
- The low cost of labor makes the introduction of labor-saving technologies and innovations unprofitable for employers.
- The lack of fair remuneration for qualifications demotivates employees to improve their professional level.

When a highly qualified engineer or scientist receives a salary comparable to that of unskilled labor, his knowledge does not function as capital. This leads to mass labor migration – the outflow of the most active and educated part of the population abroad, where their human capital can bring a higher income.

5. Quality of life and the imperative of modernization

The goal of human capital development should be the transition from quantitative indicators to qualitative ones. Quality of life is an integral indicator that includes the quality of working life, the state of the environment, the availability of cultural goods and the level of social security.

In Ukraine, the quality of working life remains low due to unsafe working conditions, high levels of stress, legal insecurity and unfair remuneration.

The loss of quality of human capital is not only the result of the consequences of war. Also, before the outbreak of large-scale hostilities, the trend of losses was characteristic of both general human capital, which, as you know, is formed through the acquisition of education and universal skills, and specific human capital, which is formed through the acquisition of narrow-profile knowledge and skills. This is due to the fact that in the conditions of the demographic crisis, the use of outdated technologies in production, an insufficient level of innovation, the motivation to acquire new competencies necessary for the development of the modern economy, as well as incentives for learning, decrease. This, accordingly, does not contribute to the restoration of the quality of human capital [17].

A way out of this situation is possible only through forced modernization. This involves:

1. Changing the structure of the economy: The transition from the raw material model to the production of products with high added value.
2. Creation of demand for knowledge: Only high-tech industries need high-quality human capital and can pay for it.
3. Reforming the social sphere: Investments in health and education should be considered not as budget expenditures, but as investments in national wealth.

6. Conclusions

The study's results provide grounds to assert that, in modern conditions, the human capital of Ukraine primarily functions in a latent form, as labor potential that does not fully realize its potential. The deep systemic contradiction lies in the discrepancy between the high quality of labor resources (educational level) and the technological backwardness of the production sector, which is not able to effectively assimilate this resource.

The demographic crisis (depopulation, high premature mortality) undermines the physical basis for the reproduction of human capital. Investing in a person becomes risky due to the short period of their return.

The education system is idling, producing a surplus of specialists who are not used in their specialty, which leads to dequalification and social apathy.

The low cost of labor, which does not reach the level of the EURPC, is the main demotivator for innovative activity and the cause of labor migration. Labor in Ukraine is underestimated, which makes it impossible to reproduce the labor force normally.

Overcoming systemic contradictions is possible only by abandoning the inertial scenario of development in favor of the innovative one. We need a state policy aimed at creating high-tech jobs, which will automatically increase the demand for quality education and provide a decent level of wages, turning knowledge from potential into real capital.

References

1. Antoniuk, V. P. (2006). Sotsialno-ekonomichni aspekty formuvannia liudskoho kapitalu v Ukraini [Socio-economic aspects of human capital formation in Ukraine]. *Demography and Social Economy*, (1), 139–147. <https://nasplib.isofts.kiev.ua/handle/123456789/11662> (in Ukrainian)

2. Baula, O., Svyarenko, D., Liutak, O., Ivantsov, S., & Zhydyk, A. (2025). Modelling of National Economic Development in the Context of Ensuring Sustainable Development and Human Capital Progress. *Financial and credit activity problems of theory and practice*, 3(62), 132–143. <https://doi.org/10.55643/fcaptop.3.62.2025.4773>
3. Becker, G. S. (1993). *Human Capital: Theoretical and Empirical Analysis, with Special Reference to Education* (3rd ed.). University of Chicago Press. <https://www.nber.org/books-and-chapters/human-capital-theoretical-and-empirical-analysis-special-reference-education-third-edition>
4. Bilorusets, L., Mylenkyi, V., Lunova, T., Zhurba, O., & Samoilenko, V. (2025). The Development of Human Capital within the Framework of the Demographic Economy of Ukraine: Factors of Stability. *International Journal of Economics and Financial Issues*, 15(4), 144–151. <https://doi.org/10.32479/ijefi.19299>
5. Blyzniuk, V. V. (2011). Liudskiyi potentsial: osoblyvosti formuvannia dlia modernizatsii [Human potential: Features of formation for modernization]. *Economics and Forecasting*, (4), 106–116. http://nbuv.gov.ua/UJRN/econprog_2011_4_12 (in Ukrainian)
6. Chukhno, A. A., Yukhymenko, P. I., & Leonenko, P. M. (2007). *Suchasni ekonomichni teorii* [Modern economic theories]. Znannia. http://books.zntu.edu.ua/book_info.pl?id=120889 (in Ukrainian)
7. Hitka, M., Kucharčíková, A., Štarchoň, P., Balážová, Ž., Lukáč, M., & Stacho, Z. (2019). Knowledge and Human Capital as Sustainable Competitive Advantage in Human Resource Management. *Sustainability*, 11(18), 4985. <https://doi.org/10.3390/su11184985>
8. Hrishnova, O. A. (2001). *Liudskiyi kapital: formuvannia v systemi osvity i profesiinoi pidhotovky* [Human capital: formation in the system of education and professional training]. Znannia. (in Ukrainian)
9. Ilyina, A. (2025). State Regulation and Innovation Infrastructure in the National System. *Revista de Cercetare si Interventie Sociala*, (89), 100–127. <https://doi.org/10.33788/rcis.89.6>
10. Levkovska, T. V. (2013). Ekonomichni problemy lehkoj promyslovosti Ukrainy [Economic problems of light industry of Ukraine]. *Innovative Economy*, 3(41), 41–47.
11. Libanova, E. M. (2014). Nerivnist za dohodamy v suchasni Ukraini [Income inequality in modern Ukraine]. *Social and Labor Relations: Theory and Practice*, 2(8), 26–36. <https://businessperspectives.org/journals/social-and-labour-relations-theory-and-practice>
12. Libanova, E. M. (Ed.). (2007). *Smertnist naseleння Ukrainy u trudoaktyvnomu vitsi* [Mortality of the population of Ukraine in the working age]. Institute for Demography and Social Studies.
13. Mandybura, V. (2009). “Liudskiyi kapital”: obiektyvna ekonomichna realnist chy ideolohema? [“Human capital”: objective economic reality or ideologeme?]. *Ukraine: Aspects of Labor*, (2), 26–33. <http://jnas.nbuv.gov.ua/article/UJRN-0000283458>
14. Markuts, Y., Studennikova, I., & Mykhalyk, L. (2025). *Ukraine Human Capital Chartbook*. Kyiv School of Economics. <https://kse.ua/wp-content/uploads/2025/05/Ukraine-Human-Capital-Chartbook-2025.pdf>
15. Melnychuk, D. P. (2015). *Human Capital: Priorities of Modernization of Society in the Context of Improving the Quality of Life of the Population*. Monograph. Polissya. https://www.idss.org.ua/monografii/2015_Melnichuk.pdf
16. Naseleння Ukrainy. (2008). *Narodzhuvanist v Ukraini u konteksti suspilno-transformatsiinykh protsesiv* [Birth rate in Ukraine in the context of socio-transformational processes]. ADEF-Ukraine.
17. Sanduhej, V., Bila, I., Shevchenko, O., Manzhula, I., & Iliukhina, V. (2025). Human capital as a driver of the formation of Ukraine’s competitive advantages in the post-war period. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, (1), 157–163. <https://doi.org/10.33271/nvngu/2025-1/157>
18. Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review*, 51(1), 1–17. <https://www.jstor.org/stable/1818907>
19. Schultz, T. W. (1971). *Investment in Human Capital*. Free Press. https://books.google.com/books/about/Investment_in_Human_Capital.html
20. Shevchenko, I., Zavadskykh, H., Ptashchenko, O., Zvonar, V., & Vishka, I. (2023). The Application of Digitization in the Economy as a Promising Direction in the Growth of Human Capital. *Economic Affairs*, 68(1s), 345–352. <https://doi.org/10.46852/0424-2513.1s.2023.37>
21. United Nations Development Programme. (2023). *Human Impact of the War in Ukraine: Protracted War, Worsening Needs*. UNDP. <https://surl.li/ozkxaa>
22. Zhuravel, V. O., Karpushova, O. V., Bielousov, V. D., Platonova, H., & Dyachenko, O. A. (2023). Social Security of Migrant Workers from Ukraine in EU Member States. *BESTUUR*, 11(2), 333. <https://doi.org/10.20961/bestuor.v11i2.78777>