

DEVELOPMENT AND PRESERVATION OF HUMAN CAPITAL UNDER THE CONDITIONS OF THE CREATIVE ECONOMY

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ABSTRACT

*The transformation of the world economy is characterized by a change of emphasis from an industrial society to a society of knowledge and intelligence. This leads to the emergence of a new segment of the economy – the creative economy, which is essentially a symbiosis of culture, art and economy and it is based on creative human capital. **The purpose** of the academic paper is to study the features of the process of intellectualization, the role of human capital and its creative functions in a new type of economy based on intellectual activity.*

The basic methods used in the present research are as follows: statistical analysis, index and analytical methods, methods for estimating structural dynamic shifts, the method of comparisons. Along with this, the generally accepted methods of economic research have been also used, namely: the economic and statistical method and the method of economic and mathematical modeling (regression analysis) (in order to determine the impact of indicators characterizing the development of the creative sector of the economy on the level of GDP per capita), etc.

The importance of the creative economy in the development of the European countries and the role of human capital in the context of the formation of this economy sector has been updated. The essence of the category “development of human capital under the conditions of a creative economy” has been defined and its components have been specified. The features of the creative economy’s structure in the EU have been analyzed through the study of the dynamics of the number and structure of enterprises operating in the creative sphere. The number and the relative share of the population employed in the creative sector of the economy have been studied. The basic features of human capital development in European countries through the dynamics of the following indicators have been illustrated, namely: the coefficient of age dependence, life expectancy of the population, the risk of poverty, fully representing the social standards of the EU member states. In order to study the mutual interaction of the creative economy and human capital, a regression analysis has been performed. The basic components of development and preservation of human capital under the conditions of creative economy have been outlined.

Keywords: Creative economy; Human capital; Investing in human capital; Economic advance.

INTRODUCTION

A special place in the national economy belongs to the creative industries, which are based on cultural activities, the development of which is confirmed by the gradual transition from an industrial society to a society of knowledge and intelligence. A new segment of the economy is being built - the sphere of creative industries, which has arisen on the basis of a symbiosis of culture, arts, and economy, and they are established on the interaction between government policy, social policy, and art policy.

The key value of the creative economy lies in its intellectual capital, which is divided into subspecies, namely: human, organizational, and consumer. Human capital is characterized by the level of knowledge, creativity, experience, moral values, and work culture, and health state. The development of human capital under the conditions of the creative economy is important due to the fact that it forms the structural or organizational capital of the industry, which determines the market position of the creative industry and the development of the creative industry as a whole. After all, it characterizes the set of established and developed productive abilities, as a result of investment in education and health care, personal traits, and motivations of individuals who are in their possession, which are used in the creative industry, promoting productivity and, thus, affecting the value-added generated in this area of the national economy. Therefore, an important issue is studying aspects of the formation and use of human capital under the conditions of the creative industry.

LITERATURE REVIEW

The development of the creative economy and the gradual formation of its sectoral structure were caused by the provision and intellectualization of social development, which took place under the influence of global external factors (international economic integration processes, internationalization and globalization of social development). Information and communication technologies (including the Internet) have contributed to greater transparency of the labor market, as well as helped create better educational conditions, which allowed gaining new knowledge and becoming more mobile in the professional space of potential employees. In the modern business environment, the creative human resource and its new qualitative characteristics (creativity, originality, criticality, speed of decision-making) are highly appreciated; consequently, there is a tough struggle between employers for such specialists (Kuznetsova, 2016). The creative industry can be defined as a set of economic activities related to the creation or use of knowledge and information (Hesmondhalgh, 2002).

Human capital, according to the viewpoint of Becker (1964), one of the creators of the theory of human capital, is storage of knowledge, skills and motivation available to everyone. The required amount of effective human capital is a key source of scientific and technological progress and the transition to a new model of technological development in the country (Diebolt & Hippe 2019).

According to the viewpoint of Florida (2002), the founder of the “creative class” theory, creativity depends on the environment that supports it, as well as on a wide range of social, cultural and economic factors. Creative class helps attract new principles both to work and to everyday life. Members of this class uphold the new values of the younger generation. Representatives of the creative class are distinguished by mobility, flexibility, self-education, “new” workplace, and leisure as work, social participation, active recreation and interest in street culture (Florida, 2002). Throsby (2014) draws attention to the fact that along with assessing the contribution of the creative class to the development of the creative economy,

the issue arises of determining the contribution of creative industries to GDP. Creative goods have no monetary value, although they certainly have intangible value to the society. The author has also proposed the structural construction of the creative industry on the basis of substantiation of the concentric model with four circles, the core of which involves classical cultural activities (music, literature, performing and visual arts) (Throsby, 2008). According to the opinion of Harrison & Huntington (2000), cultural differences are the reasons for the underdevelopment and prosperity of countries. Some cultural features contribute to the modernization of the society, while others, on the contrary, hinder the economic development of the country. Thus, in order to build a creative economy, investments should be made in culture and art and towards increasing the country's human capital.

Kalenuk & Kuznetsova (2020) have identified the basic features of human capital development, the formation of its new quality in the creative economy. Versal & Tereshchenko (2020) interpret human capital as the basic factor of the creative economy, the development of which depends on the level of development of education and science in the country. Shaulska et al. (2021) have proposed a model of multilevel innovation policy in which the creative economy is presented in the context of capitalization of human potential based on the principles of social responsibility (state, business and the individual), innovation, regularity and inclusion (gaining accessibility and stimulating an increase in the degree of participation of all citizens in the society).

Examples of policies designed for creative industries are common occurrences in the world (Mellander et al., 2013). Gasparin and Quinn (2020) have developed a new policy model for creative industries in transition economies INCITE (Innovation and Creativity in Transition Economies), which includes four components, namely: education and human resources, infrastructure, intellectual property rights and the freedom of expression. Some scholars have considered the features of human capital formation in various subsectors of the creative economy, in particular: architecture (Korobanicova & Pacutova, 2015); design (Korobaničová, 2016); batik (Sutisna & Saudi, 2018). They have come to the conclusion that the educational factor is a determining one in the formation and development of human capital in the creative economy.

Sanchez-Serra (2014) examines the role of human capital in the development of creative industries and creative clusters in France. In particular, the importance of talent in local economies and dependence of creative industries on the specialization is highlighted. Comunian, Faggian & Jewell (2014) and Abreu and Grinevich (2014) have conducted a more detailed analysis of "creative human capital". Munteanu (2015), studying the impact of human capital and creative industries on economic growth in the Romanian regions, has concluded that economic advance is influenced by the share of enterprises operating in the creative industry and the availability of secondary education.

One of the central aspects of human capital formation is the idea that human capital (including natural talent) is developed through conscious investment. Schultz (1995) includes the following measures here, namely: school education, on-the-job training and health promotion. He also notes that investing in human capital is a way to overcome the country's poverty. Londar et al. (2020) proposed basic directions for human capital investment in the creative economy.

Thus, scientists have confirmed the thesis that the development and preservation of human capital in the creative economy is based on investing in education and health care, mobility and access to information. On the whole, the analysis of scientific sources confirms the hypothesis of the interrelationship between investing in human capital and the development of the creative class and the creative economy, which in general leads to

economic advance. However, the issues of development and preservation of human capital in the creative economy have remained insufficiently disclosed in scientific investigations.

METHODOLOGY

In order to analyze the basic aspects of development and preservation of human capital in a creative economy, the European Union has been chosen as the basis of the research, forasmuch as the experience of development of this sector in the EU countries is indicative and one of the most successful in the world.

The research has been carried out on the basis of indicators posted on the Eurostat website (Eurostat 2019a; 2019b; 2019c; 2019d), namely: the number of enterprises in the creative sector of the economy, the number of people employed in the creative sector of the economy, life expectancy of the population, level of GDP per capita for the period 2014-2018 and 2019. Statistical methods have been used for data analysis from the simplest (descriptive statistics) to regression analysis, which has made it possible to determine the impact of the creative economy on the development and preservation of human capital. The regression analysis has been performed on the basis of the constructed regression equation, which has made it possible to determine the influence of each independent variable in the variation of the studied dependent variable. In the aggregate, regression analysis involved the following stages: selection of linear regression model and formation of initial data; implementation of regression analysis using Excel tools; obtaining results and their analysis.

RESULTS

Diagnostics of the development and preservation of human capital under the conditions of the creative economy should be based on studying the basic trends in the functioning of the creative industry and an analyzing the features of human capital in the EU countries. In order to study the dependence of the creative economy and human capital development, it is advisable to perform an appropriate regression analysis (Table 1 and Table 2).

Years	GDP per capita, USD (y)	Number of enterprises in the creative sector of the economy, units (x_1)	Employment of the population in the creative sector of the economy, pers. (x_2)	Life expectancy of the population, years (x_3)
2014	38026,8	1101722	68117	80,8
2015	38862,18	1088088	6833,5	80,5
2016	39573,58	1119280	69641	80,9
2017	40592,56	1142268	71817	80,9
2018	41384,25	1182257	72706	81

Regression statistics	
Multiple R	0,956504966
R^2	0,91490175

Normalized R ²	0,659607				
Standard error	7,800,417,635				
Observations	5				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	6,541,683,673	2,180,561,224	3,583,707,652	0,3661
Residue	1	6,084,651,528	6,084,651,528		
Total	4	7,150,148,826			

Thus, the theoretical equation of linear regression will look as follows:

$$y = -563156,97 + 0,026 \times x_1 - 0,048 \times x_2 + 7131,024 \times x_3$$

From the results obtained, it can be concluded that an increase in the number of enterprises and life expectancy of the population contribute to an increase in the level of GDP per capita, while the interrelationship between the performance indicator and the employment of the population in the creative economy sector is inverse.

The value of the multiple correlation coefficients R indicates that the econometric model adequately describes this economic dependence. 91% of the variations in the change in the effective feature depend on the indicators selected for the analysis, and the remaining 9% - on random factors.

Thus, according to the results of the research it is advisable to identify the following components of development and preservation of human capital under the conditions of the creative economy, namely:

- Implementation of an effective state policy towards supporting the development of the creative sector of the economy;
- Expansion and intensification of investment in the development of the knowledge economy;
- Expansion and activation of professional networks and associations;
- Creation of business incubators, clusters and development of hubs in the creative sector;
- Internationalization and globalization of the creative sector of the economy.

The outlined steps will ensure the progressive development of the creative sector of the economy and minimize the negative impact of environmental factors on this area of activity, which will certainly have a positive impact on human capital.

DISCUSSION

The creative economy focuses on such symbolic sources as creativity and culture forasmuch as they have been created in the creative sector. Due to this fact, the qualifications of creative professionals increase, and a gradual formation of sustainable value occurs. Thus, according to the results of the research conducted, it should be noted that the development of the creative sector significantly affects the economic situation of countries, including the EU.

Furthermore, as in the study of Dindire (2012), we also note that in a knowledge-based society and in a creative economy, to which all the EU countries aspire, also guided by the norms of the European Commission through the Europe 2020 Strategy, the nation's human capital acquires new values, representing a powerful comparative advantage for countries that invest in this direction.

The proposed economic category “development of human capital under the conditions of the creative economy” fully takes into account the content of the creative industry, laid down by Hesmondhalgh (2002). After all, this area allows implementing the personal traits of professionals, whose value is growing. Kuznetsova (2016) also notes that at the present stage of economic development, the dominant features determining the value of human resources are their creative abilities. Thus, it will require the solution of new educational tasks in the society, forasmuch as it is important not only to transfer the accumulated knowledge, but to form a creative personality. The fact that the development of the creative economy depends on the quality of higher education and science is also noted by Londar et al. (2020).

The results of the research conducted to a certain extent coincide with those given in the works of Becker (1964), who has noted that the basic source of the development of scientific and technological progress is a sufficiently effective human resource. Sharing the opinion of Kalenuk and Kuznetsova (2020) on the results of the research, it should be noted that it is human capital that is the basis and driving force for the development of the creative economy, which is an extremely promising direction of economic activity, forasmuch as it is based on the use of an inexhaustible resource, which is human capital.

In addition, the development of the creative industry has a significant impact on the economy, in particular, the unemployment rate, regional development by expanding the boundaries and opportunities for employment of people of all ages and genders. This aspect is extremely valuable in the context of a crisis caused by the Covid-19 pandemic, which is characterized by a number of negative social phenomena, including rising unemployment. However, as Jílková (2021) points out, the Covid-19 crisis has changed the perception of the benefit system by the employees and created flexible benefits for work (distance work, flexible working hours, payment for a healthy lifestyle, etc.). All this has significantly affected the development and preservation of human capital; consequently, it will be relevant to further study these changes.

By the way, our research is abstracted from the conditions of globalization, under which there is a threat that “cultural dumping”, in particular, from the United States, contributes to the desolation or destruction of local art. The thesis of “McDonaldization” has been gaining attention in recent years (Kabanda, 2015). In addition, cultures (and arts) are constantly being developed, advanced and borrowed from each other. Therefore, the institutional memory of human capital becomes an important issue.

CONCLUSION

The development of the creative economy involves rethinking the role of man in the structure of production factors. The human capital, characterized by a high level and efficiency of use of intellectual potential, is able to produce business ideas that, with proper financial support, can ensure the profitability of the creative sector of the economy. In addition, this sector will reduce the social burden on public finances, creating the conditions for expanding the boundaries of employment and self-fulfillment of the economically passive population.

The current stage of development of the economic space is characterized by rethinking the role and significance of economic resources in the context of the growing importance of the human factor, which is the driving force behind the development of the creative industry. The creative economy is an alternative sector; its functioning is provided by an inexhaustible resource - human capital – and it is implemented through the interaction of intellectual (creative) potential of mankind and intellectual property. Creative economy is

able to fully implement the creative, intellectual, innovative potential of people and create conditions for the full implementation of human potential. This mainly explains the growth in the share of the creative sector in the structure of the economies of advanced countries. In this context, the experience of the EU countries is significant, which through the support of cultural heritage and investment in human capital development maintain their leadership in the field of creative economy development.

An assessment of the number and structure of the population's employment in the creative economy sector of the EU indicates that this area is quite promising from a social point of view and provides a significant proportion of people with workplaces.

The basic directions of human capital development provide the effective application of measures for carrying out state support of the creative sector through targeted funding, stimulating the implementation of creative business ideas and expanding the geographical boundaries of development of this sphere.

The present research has made it possible to conclude that the creative economy has a fairly deep meaningful content, which provides the preservation of the cultural heritage of the European countries and raising social standards through employment of the population and the use of their knowledge, skills and abilities, contributing to the population's self-fulfillment.

In order to assess the effectiveness of the creative economy and the impact of human capital development on it, the regression analysis has been conducted which indicates a direct influence of the number of enterprises operating in the creative sphere and life expectancy on GDP per capita. Herewith, the interrelationship between the number of employees in the creative economy and the performance indicator is inverse.

Subsequent investigations should be devoted to establishing the mechanism of formation and development of human capital in a creative economy and the study of the impact of the pandemic, as well as the formation of a competence model in order provide empowerment of managers and employees in the creative economy.

REFERENCES

- Abreu, M., & Grinevich, V. (2014). Academic entrepreneurship in the creative arts, *Environment and Planning C: Government and Policy*, 32, 451-470.
- Becker, G. S. (1964). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. National Bureau of Economic research.
- Comunian, R., Faggian, A., & Jewell, S. (2014). Embedding arts and humanities in the creative economy: the role of graduates in the UK. *Environment and Planning C: Government and Policy*, 32, 426-450.
- Diebolt, C., & Hippe, R. (2019). The long-run impact of human capital on innovation and economic development in the regions of Europe. *Applied Economics*, 51(5), 542-563.
- Dindire, L. M. (2012). Human capital - main competitive advantage in the creative economy and in the knowledge-based society. Assessment model of the nations' human capital - the case of the EU countries. *Proceedings of International Days of Statistics and Economics*, pp. 316-326.
- Florida, R. (2002). *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life*. Basic Books, New York.
- Gasparin, M., & Quinn, M. (2020). The INCITE model of policy development for the creative industries: the case of Vietnam. *Journal of Asian Business and Economic Studies*, 28(1), 31-46.
- Harrison, L., & Huntington, S. (2000). *Culture Matters: How Values Shape Human Progress*. Basic Books, New York.
- Hesmondhalgh, D. (2002). *The Cultural Industries*. SAGE Publications.
- Jílková, P. (2021). Sustainable Corporate Strategy: The Role of Human Capital in the Time of COVID-19 Crisis. *TEM Journal*, 10 (2), 699-706

- Kabanda, P. (2015). Work as Art: Links between Creative Work and Human Development. Human Development Report Office. United Nations Development Programme. Retrieved from <http://hdr.undp.org/en/content/work-art-links-between-creative-work-and-human-development>
- Kalenuk, I., & Kuznetsova, N. (2020). Human Capital Development in the Conditions of Creative Economy, *Central Ukrainian Scientific Bulletin. Economic sciences*, 4(37), 77-85.
- Korobaničová, I. (2016). The role of human capital in the creative economy in the Košice Region, *Journal of Applied Economic Sciences*, 11(7), 1-6.
- Korobanicova, I., & Pacutova, G. (2015). The Human Capital in the Creative Economy in Region In 5th Central European Conference in Regional Science (CERS), Proceedings of 5th Central European Conference In Regional Science, International Conference Proceedings, pp. 421-431.
- Kuznetsova, N. (2016). Human capital role in becoming and development of creative economy. *Economics & Education*, 1(2), 36-39.
- Londar, S., Lytvynchuk, A., Versal, N., Posnova, T., & Tereshchenko, H. (2020). Investment in Human Capital Within the Creative Economy Formation: Case of the Eastern and Central Europe Countries. Comparative Economic Research. *Central and Eastern Europe*, 23(4), 129-148.
- Mellander, C., Florida, R., Asheim, B. T., & Gertler, M. S. (2013). *The Creative Class Goes Global*. Routledge, London.
- Munteanu, A. (2015). The Impact of Human Capital and Creative Industries on Regional Growth in Romania. *International Journal of Academic Research in Economics and Management Sciences*, 4(3), 1-10.
- Sanchez-Serra, D. (2014). Talent and creative economy in French local labour systems. *Environment and Planning C Government and Policy*, 32(3), 405-425.
- Shaulska, L., Karpenko, A., & Doronina, O. (2021). Drivers of macroeconomic growth in a creative economy: innovation policy and human capital *AD ALTA: Journal of Interdisciplinary Research*, 11 (1), 178-186.
- Sutisna, D. M. N., & Saudi, M. H. M. (2018). Human Capital in Improving Creative Industrial Performance: A study in the Creative Industry of Batik Trusmi, Cirebon District, West Java. *International Journal of Engineering & Technology*, 7(4.34), 295-298.
- The Eurostat (2019a). At-risk-of-poverty rate by poverty threshold, age and sex - EU-SILC and ECHP surveys. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/ilc_li02/default/table?lang=en
- The Eurostat (2019b). Culture statistics - 2019 edition. Retrieved from: <https://ec.europa.eu/eurostat/web/products-statistical-books/-/ks-01-19-712>
- The Eurostat (2019c). Persons working as creative and performing artists, authors, journalists and linguists by individual and employment characteristics. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/cult_emp_artpc/default/table?lang=en
- The Eurostat (2019d). The EU in the world-iving conditions. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=The_EU_in_the_world_living_conditions#Social_protection_expenditure
- Throsby, D. (2008). The concentric circles model of the cultural industries. *Cultural Trends*, 17(3), 147-164.
- Throsby, D. (2014). *Economics and culture*. Cambridge University Press, UK.