

INFORMATION CULTURE AS A FACTOR IN THE REPRODUCTION OF HUMAN CAPITAL: REGIONAL ASPECT

Galina Bannykh – Svetlana Kostina

Abstract

The article deals with a such component of human capital as an information culture. The authors analyze the theoretical and methodological approaches to the phenomenon of the reproduction of human capital, highlighting the modern information culture as one of it's most important characteristics.

A special role in human capital is given to it's innovative potential, which serves the engine of the modern economy. Transition of the modern society into a new stage of development, which the researchers called information brings to the front the ability and knowledge of the individuals associated with information technology.

The reproduction of human capital, including information culture as it's component, is largely determined by factors such age and place of residence. The findings confirmed by the results of empirical research conducted in 2015 in the Sverdlovsk region (Russia), according to which the level of information culture essentially defines human capital in the region. Based on the analysis, the authors can conclude the existing inequality of human capital development between types of settlements and regions of the Russian Federation, which is due to various reasons, many of which are economic in nature and depend on the policy and the efforts of the regional authorities.

Key words: : information culture, human capital, region, reproduction of human capital

JEL Code: J24, Z13, R19

Introduction

The leading concept of the role and place of human beings in social production is the theory of human capital. Proponents of this concept consider the human capital, on the one hand, as the totality of the productive capacity of the modern worker, on the other hand - the

costs of the enterprise, the state and the person on the permanent formation and improvement of their own abilities.

The study of the essence of human capital and its reproduction process devoted a significant number of works by both foreign and domestic sociologists, economists and managers. Fundamentals of human capital theory were formulated in the works of G.Becker, S. Bowles, A. Maslow, JI. Hansen, F. Welch, B. Chiswick. Start of development of the human capital theory as an independent section of economic analysis work was laid by J. Mintzer. Various theoretical and empirical aspects of the research developed in the works of G. Kendrick D. Jorgenson, J. Griliches, F. Machlup, S. Kuznets.

At the same time, in some studies they indicate that in the non-Western countries the human capital theory works differently. The findings indicate that human capital development influences pay, but not due to enhanced performance as posited by human capital theory, suggesting that social and institutional pressures seem to influence the relationships. Furthermore, pay-for-performance compensation mechanisms appear to work only at the general employee level but not at the managerial level (Hayek, Thomas, 2016, Krutova, 2015).

1 The concept of information culture and human capital

Human capital is being considered at several levels: the macro level (as an economic category, which characterizes the national wealth), the meso level (as a component of equity organizations) and the micro level (as employee characteristics, which allows him to earn an income).

The basic components of human capital at the macro level is the mentality of the people, quality education, health, the accumulated knowledge (level of scientific development and the competitiveness of existing knowledge), competition and economic freedom, as well as law-abiding citizens, the rule of law, security of business and citizens (Kasaeva, 2015).

The basic components of human capital is the mentality of the people, quality education, health, the accumulated knowledge (level of scientific development and the competitiveness of existing knowledge), competition and economic freedom, as well as law-abiding of the citizens, the rule of law, safety of business and citizens.

Modern authors like to use the category of human capital, human capital development, especially in nowadays microeconomic situation (Becker, 1962, Hayek, 2016). Some researchers pay attention to the interaction between the human (administrative) and social

capital in organizations and communities. As they say: “We do not find support for the expectation that social capital and human administrative capital reinforce the benefits of each other, but we find evidence that the two resource types are substitutable. This implies that management may substitute human capital resources when social capital is low to benefit public program performance”. (Aryee, 2013).

Human capital in the narrow sense means the «reserve» (potential) of an ability, skills, knowledge embodied in people (Suvorov, 2014). At the level of the individual innate human abilities are included in the structure of the human capital, as well as all the knowledge, experience and skills that it acquires in the course of life (Pavlova, 2010).

The intellectual component includes the innate ability of man, and all the knowledge, experience and skills that he acquires in the course of life. A special role in human capital is given to its innovative potential, which serves the engine of the modern economy.

Transition of the modern society into a new stage of development, which the researchers called post-industrial, information, postinformational, postmodern, brings to the fore the ability and knowledge of the individuals associated with information technology. Information, innovation and knowledge are determined by economic factors, as well as a critical national resource, which largely determines the well-being of the state and citizens comfort.

At the same time the above-mentioned components of human capital development are both components of the information culture. Through feedback information culture influences the reproduction of the human capital. In other words: information culture - is productive and social resource, which provides the efficiency of intellectual property entities and society in general. And, as we can see, the information resource in the form of knowledge and information as well as information technology, ensuring the effective implementation of human capital as a factor of development is the core of human capital, its driving force, its main component.

2. The impact of information culture on the reproduction of the human capital

At the end of the 20th century in the domestic and foreign researchers began to arise interest in the phenomenon of information culture. In a cultural, philosophical and sociological context of information culture devoted to the study of several scholars (D. Bell, M. Castells, A. Laborita, G. Martin, F. Webster, B. Winston, R. Katz, E. Masuda, H. Stouner,

A.Giddens, H.Kissinger, D. Meadows, G. Schumann and others). The scope of this concept in the 21st century has been greatly expanded, and the information culture are beginning to be viewed as an integrative phenomenon, the basis of the culture of the information society, the main factor in the development of personality, the factor of regulating the relationship between the individual and society, arising on the basis of the information needs of the individual, and others.

Information culture is the degree of mastery by a person or social group of information, body of knowledge, norms and values to ensure effective cooperation in the information environment, contributing to the development of cultural identity.

As the methodological basis of the authors of the study multifactorial analysis model was developed, which includes 3 blocks of culture content - cognitive, axiological, praxeological (Bannykh, 2014). The first block (axiological) represents the characteristics of the significance of information content and priorities in the selection and sources of information. The second block of the circuit analysis information culture - cognitive, includes as a personal component - the knowledge and skills of different socio-demographic groups. The third block - praxeological involves disclosure of the activity aspect of information culture: its impact on the environment and the individual activities in the information.

Information needs, the purposes of searching, the analysis and processing of information, its usefulness etc. are included in the axiological block of information culture and directly influence the reproduction of human capital. Information need - is the lack of information which is necessary to maintain the vital functions of the individual, social group, society as a whole, which is realized through the conversion ratio (information activities), including search, selection, processing, production and distribution of information. Information need has two major distinctive features: the information as an object in the process of consumption is not destroying, but becomes the basis for new information files, and information needs, always accompanies the satisfaction of any other requirements.

Cognitive block of information culture, which largely determines the level of human capital can be considered as an information literacy of the individual. Literacy in the area of information and communication technologies - is to use digital technology, communication tools or networks to gain access to information, its management, its integration, evaluation and creation for the functioning of modern society.

Information and computer literacy has gained importance in the modern world. Among its core competencies - computer literacy, which involves the confident and critical use of Information Society Technologies (IST) for work, leisure and communication.

Praxeological unit reveals features of the individual development of the information environment, space infrastructure in everyday life.

3. The results of sociological research in the region

The level of development of information culture of the population as a factor of the reproduction of the human capital in the Sverdlovsk region has been estimated in the course of sociological research. A representative sample was 934 residents of the Sverdlovsk region.

To investigate the axiological block of the information culture there was undertaken the study of the information needs and the ability to meet them.

An interesting indicator of the information needs of the population, is their interest in the emergence of new products on the market of technical devices in the information society and the scientific and technical progress is an indicator of the expected demand for emerging products and services. The greatest interest in the updates of technical equipment shows young people (27%), and men in general (22%), the smallest - the people in the status of widows and widowers and people in rural areas.

Meeting the information needs is through the use of certain technical facilities, some of which have become the basis of objective environment of everyday life for the majority of Russians. The most common subject of consumption to meet the information needs of the inhabitants of the area, a mobile phone, the second highest prevalence - a stationary computer. Next in descending order - the laptop, TV and landline phone. There is the advantage of using technological devices, providing a great opportunity of the information activities: a more mobile, a more functional. In 11% of families they own four or more smartphones and televisions.

Statistical analysis shows that the consumption of technical devices depends on the age of consumers, their marital status and the type of settlement in which they live. It's simply that the number of devices owned by the family, is depended on the number of family members - the more of them, the more gadgets they own.

Mobile phones are available at 86% of the inhabitants of villages and small towns of the Sverdlovsk region, in large cities such only 55% of the population, but at the same time among the inhabitants of large cities the highest proportion of those who own two or three mobile at the same time - 25% and 5% respectively. In large cities, and the highest percentage of those who own at least one smartphone - 77% of respondents against 32% of rural residents.

The consumption of technical devices does not depend on income of the representatives of different socio-demographic groups, but the amount of money they spent each month to meet the information needs differs in different ages groups and family groups of the population Sverdlovsk region. the most profitable segments of the population spend the greatest amount to meet their needs. For example, if 22% of those who can afford the purchase of durable goods, spend from 1500 to 2000 rubles monthly to pay for information services, in the category of the most low-income segments of the population it's only 5.4%.

The most popular channels of exchanging the information among residents of Sverdlovsk region are electronic mail (using by 83.3% of respondents) and pages on social networks (74.2%). Almost half (45.2%) of respondents are registered in special applications for communication, a third – on the portal of public services, the quarter - on specialized portals of purchasing and services, 13% - on thematic portals.

Although the analysis showed the presence of age and gender characteristics in dissemination of information, the type of settlement has the greatest impact in this area. For example, residents of cities and large cities are more often than others disseminate information through communication in social networks, but residents of other types of settlements - through professional communication. Villagers prefer to communicate with friends and family, they use the possibilities of the Internet (mostly social networks) less diverse, than urbanites.

The content of the cognitive block of the information culture constitute knowledge, abilities and skills of individuals with the information and information technology. To study this aspect of the survey respondents were asked to rate their computer and Internet skills on a 5-point scale, where 5 points mean excellent proficiency, 1 point - no skills at all. None of the skills have received an average rating above 4 points, indicating a rather low level of self-assessment by respondents of their computer and Internet skills. The most developed skills, where the average score above 2.5, are: sending e-mails with attached files (2.88), work with files and folders (moving, archiving, etc.) (2.77), the use of search engines to find information (2.62), working with text editors (2.55).

In the range of 2 to 2.5 points were assessed skills such as the transfer of files between a computer and peripheral devices (digital camera, player, mobile phone); to work with spreadsheets; records chats, comments, news, participate in forums online; phone calls over the Internet.

Between 1 and 2 points the following skills were evaluated: working with graphic editors; creation of electronic presentations; software installation; Installation and connection

of new devices (printer, modem). Least developed skills, the average score which is less than 1, as expected, were writing computer programs using special programming languages and website creation.

If we analyze the results in terms of working with a computer - working with the Internet, we see that the skills of working with the Internet have been evaluated by the respondents much higher. These include: sending letters, the use of search engines, write in chat rooms, forums, Internet calls. In second place - work with the software (file transfer between a computer and peripheral devices work with a text editor, create spreadsheets, graphics editors, creating electronic presentations). Less developed respondents skills related to computer maintenance - installation of software; Installation and connection of new devices (printer, modem).

The analysis showed that the respondents' assessment of their computer and Internet skills directly due to their age. At the same time in all respects evaluation observed a single trend - the average score decreased from young people to older people.

When analyzing the differences in the assessment of the skills of men and women, we see that the overall trend is preserved. At the same time the average scores by women of their computer and Internet skills for all parameters (except for working with text editors) lower than the same at men: the difference is 0.05 (working with spreadsheets) to 1.14 (record chats) score .

The majority of respondents indicated that gained skills to work with information, information technology by themselves (78% of respondents), more than half - with the help of friends and acquaintances (58%). Almost a quarter of respondents said that these skills were obtained in high school (22.8%), 18.4% - by specialized courses, 12.1% - in the school.

More than half of respondents (58.8%) believe that they need to obtain additional skills in working with information, information technologies - the ones who chose the answer "very need" and "need more." Almost every sixth respondent believes that he does not need these additional skills.

There is an interest in the effect of respondent awareness of the need to obtain additional skills and his plans in this area. In this case, the correlation coefficient is very high ($V = 0.360$ Cramer significant). Planning learn new skills depends on how respondents assess their need. Thus, among the very needy, 66.2% in the near future plan to get these skills, and among the most needy - these have only just over a third. Interestingly, among those who would rather not need to obtain additional skills, 16.9% still plan to do so.

Praxeological block in the study allowed take a fresh look at the information practices of the population. Thus, according to the study, 64.1% of respondents use the Internet several times a day. Among them, the highest proportion of young people under the age of 35 years, living in a big city. This group of socially active youth is well represented on the Internet (accounts and pages on social networks, e-mail, blogs, chats, forums), prefers to use the Internet for educational or entertainment purposes with the help of mobile electronic gadgets and devices. The main channel of communication on the Web are social networks: they are used by 68.8% of the respondents. The least popular among respondents are blogs - the information through them receive 10.5% of the respondents.

An important result can be considered the fact that the received information is not only passively taken - only 7.3% of respondents did not consider themselves as sources of communication and do not spread the information further. The vast majority - 89.6% of respondents - transmit information on personal communication; 38.6% use the Internet for this purpose (social networks, blogs); 27.6% of those polled transmit information on duty, in their professional activities. The results suggest the Internet and online communication in daily practices of modern individual, rapidly expelling many of the "outdated" practice, especially noticeable in generation Y - older teenagers and young adults.

Conclusion

Information culture can be considered as a factor in the reproduction of human capital on individual and public (national) level. Its reproduction is largely determined by factors such age and place of residence. The findings confirmed the results of empirical research conducted in 2015 in the Sverdlovsk region, according to which the level of information culture essentially defines human capital in the region. Based on the analysis, we can conclude the existing inequality of human capital development between types of settlements and regions of the Russian Federation, which is due to various reasons, many of which are economic in nature and depend on the policy and the efforts of the regional authorities.

Thus, the information culture of everyday life is unthinkable without the practices of Internet communication. Internet in the daily space allows you to instantly obtain information and make daily decisions - from "what to wear" to "where to live."

Acknowledgment

The work was supported by Act 211 Government of the Russian Federation, contract № 02.A03.21.0006.

References

- Aryee, S., Walumbwa, F. O., Seidu, E. Y., & Otaye, L. E. (2013). Developing and Leveraging Human Capital Resource to Promote Service Quality: Testing a Theory of Performance. *Journal of Management*, 42(2), 480-499. doi:10.1177/0149206312471394
- Bannykh, G. A., Zaborova, E. N., & Kostina, S. N. (2015). Information culture in modern Russian society ("round table"). *Proceedings of the Ural Federal University. Ser. 1, Problems of Education, Science and Culture*, 1(135), 113-125. Retrieved from <http://elar.urfu.ru/handle/10995/30226>
- Becker, G. S. (1962). Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy*, 70(5, Part 2), 9-49. doi:10.1086/258724
- Czajkowski, Z., Kowalski, A. M., Michorowska, B., & Weresa, M. A. (2013). Human Capital and Innovation—Basic Concepts, Measures, and Interdependencies. *Innovation, Technology, and Knowledge Management Innovation, Human Capital and Trade Competitiveness*, 53-80. doi:10.1007/978-3-319-02072-3_2
- Hayek, M., Thomas, C. H., Novicevic, M. M., & Montalvo, D. (2016). Contextualizing human capital theory in a non-Western setting: Testing the pay-for-performance assumption. *Journal of Business Research*, 69(2), 928-935. doi:10.1016/j.jbusres.2015.06.039
- Hayek, M., Thomas, C. H., Novicevic, M. M., & Montalvo, D. (2016). Contextualizing human capital theory in a non-Western setting: Testing the pay-for-performance assumption. *Journal of Business Research*, 69(2), 928-935. doi:10.1016/j.jbusres.2015.06.039
- Kasaeva, T. V., Anufrienko, S. V., Yurevna, R. N., & Nikolaevna, K. N. (2015). The Russian Specificity of Developing Process of the Disbalance in Structure of the Individual Human Capital. *MJSS Mediterranean Journal of Social Sciences*. doi:10.5901/mjss.2015.v6n5s2p405
- Krutova, I. N. (2015). The Human Capital Theory through the Prism of Financial Security of Finland's Education. *Asian Social Science ASS*, 11(7). doi:10.5539/ass.v11n7p48
- Pavlova, O. N. (2010). The nature and structure of human capital in the modern economy. *Actual Problems of Economics and Law*, 4, 180-187. Retrieved from <http://cyberleninka.ru/article/n/suschnost-i-struktura-chelovecheskogo-kapitala-v-sovremennoy-ekonomike>

Suvorov, A. V., Suvorov, N. V., Grebennikov, V. G., Ivanov, V. N., Boldov, O. N., Krasil’Nikova, M. D., & Bondarenko, N. V. (2014). Approaches to measuring the dynamics and structure of human capital and assessing its accumulated impact on economic growth. *Stud. Russ. Econ. Dev. Studies on Russian Economic Development*, 25(3), 215-224. doi:10.1134/s1075700714030101

Contact

Galina Bannykh

Institution: UFU – Ural Federal University named after the first President of Russia

B.N.Yeltsin

620002, Russian Federation, Yekaterinburg, Mira str. 19

Mail: gbannykh@gmail.com

Svetlana Kostina

Institution: UFU – Ural Federal University named after the first President of Russia

B.N.Yeltsin

620002, Russian Federation, Yekaterinburg, Mira str. 19

Mail: kostinasn@mail.ru