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**ELECTRONIC NOMADISM AS NEW MODUS OF HUMAN  
CAPITAL**

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***Abstract***

This work is devoted to the description of the influence of the new model of modern human behavior, electronic nomadism, on the filling of human capital. It is shown that e-nomadism causes changes in human capital, makes skills in information processing and working with big data in demand. Human capital has a significant impact on the efficiency of ICT use, and in turn, ICT is putting forward a number of new requirements for the filling of human capital. In this regard, it is proved that there will be growing requirements for the qualities of human capital, which allow: to optimize the “wandering” of electronic nomad on the Internet; to process those significant amounts of information that electronic nomads pass through themselves, facing them on the network. As a result of the analysis of statistical data on the Russian economy in recent years, it is shown that it is possible to predict the further expansion of the number of economic operations in the network and increase their diversity. Electronic nomadism as an intensive productive factor of modern economic development affects the increase in the share of the economic segment in the virtual space; positive dynamics of the share of economic transactions on the Internet; the emergence of risks with a moral aspect and due to anonymity, low personal liability threshold, the creation and development of new fraudulent schemes based on social engineering. These conclusions can be used in the development of social and economic policy at various levels of government.

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**Keywords:** Economics, electronic nomadism, human capital, information technologies, nomad.



## 1. Introduction

Each science has a core, which is the source of its development. The “capital” category, according to (Lemeshchenko, 2011), is among the primary elements of economic science that have not lost relevance throughout the history of its development. The group of authors headed by M. Sasaki (Sasaki, Davydenko, Latov, Romashkin, & Latova, 2009) notes that in modern socio-economic sciences the study of the types and values of different economic resources occurs mainly with the help of the term "capital".

Nan Lin considers Marx's theory of capital to be a classical theory of capital, which is based on the exploitation of social relations between the two classes (the bourgeoisie and the proletariat). Nan Lin also classifies available theories of capital (Lin, 1999). Lemeshchenko (2011) traces the evolution of the concept of capital from the works of A. Smith (considered capital from a functional and economic point of view, allocating fixed and working capital, its various spheres of application and accumulation rates, loan capital and loan interest) to K. Marx (interpreted capital as the ratio, movement, the process of circulation, passing various stages) and the emergence of the concept of human capital as a result of attempts to see the common between labor and capital.

Influenced by the works of Becker (1962), human capital became known as the possession of individual knowledge, skills and motivation, increase productivity. However, G. Becker considered man as a rational being, and with further change of interpretation of rationality from principle to hypothesis, which requires verification, there is a further refinement of the concept of capital, the addition of its concept of social capital.

The concept of human capital is becoming an increasingly dominant tool for explaining how different organizations compete strategically through the attraction, retention and development of talent (Nyberg, Reilly, Essman, & Rodrigues, 2018). The researchers note the significant role of human capital in the organizational activities of firms in mergers and acquisitions (Lee, Mauer, & Xu, 2018), etc. Interpersonal relationships, skills, competencies, according to researchers Cappelli & Crocker-Hefter (1996), allow firms to create great value for their customers. The diverse characteristics of human capital are considered to be the core competencies of the firm (Cappelli & Crocker-Hefter, 1996). The consideration of these aspects has led to a wide spread in various sectors of the so-called network organizations (Miles & Snow, 1995), which focus in their work on the interaction with other market participants and employees. The relationship between competencies and business success is well understood (Man & Lau, 2000), including cross-cultural analysis.

Currently, the researchers have studied the concept of human capital in depth. For example, there are studies on the short-term impact of climate on human capital. It is shown that short-term changes in temperature lead to a statistically significant decrease in cognitive abilities in mathematics but not reading beyond 26°C (Zivin, Hsiang, & Neidell, 2018).

At the same time, the change of dominant technologies has an impact on the identity of the individual (Yakovleva, Grigoryeva, & Grigoryeva, 2016), its behavior and decision-making. The widespread use of digital technologies has led to the emergence of the phenomenon of electronic nomadism. We believe that e-nomadism causes changes in human capital, makes skills in information processing, working with big data, possession of relevant analytical tools (specialized software in the

field of business intelligence, etc.). The above actualizes the study of electronic nomadism and its impact on human capital, which allows to expand the existing knowledge in this area.

## **2. Problem Statement**

Changes in macroeconomic, social and technological factors affect human capital, its content (the content of skills, knowledge and skills), as well as the processes of accumulation and use. Modern accelerated development of digital technologies and wide spread of mobile electronic devices lead to changes in the understanding of human capital and its behavioral matrices (Seliverstova, Iakovleva, & Grigoryeva, 2017). In addition, the transformation of external factors affects the content of human capital, which requires detailed study and seems relevant research task.

Shaposhnik argues that while economic factors are the most important factors for ensuring access to information computer technologies (ICT), the widespread use of ICT for the development of the region is essentially determined by the level of human capital development (Shaposhnik, 2006).

Arvanitis & Loukis (2009) note that both ICT and human capital determine the productivity of workers. According to the analysis of firms in Greece and Switzerland, they found that Swiss firms are more Mature due to the fact that they have learned to use both factors together for productivity growth.

According to the classical definition (Schultz, 1963), human capital refers to the totality of knowledge, skills and abilities that a person possesses and uses in the process of work and that affect his economic productivity. In turn, Medvedev & Kroshilin (2011) note that ICT ensures the success of the individual's life scenario in the conditions of the knowledge society or post-industrial society, becoming one of the most important factors determining the quality of human capital along with the level of education. That is, ICT has a significant impact on human capital. Powell & Dent-Micallef (1999) show that not all firms are able to take advantage of information technology. Indirectly, these findings also suggest, in our view, that human capital has a significant impact on the efficiency of ICT use, and in turn, ICT has a number of new requirements for filling human capital.

At the same time, this impact has not been studied in detail, no connection is made between human capital and specific examples of human behavior using ICT in the virtual space. In this regard, we will start our research with the consideration of e-nomadism and identify the consequences of its impact on human capital.

## **3. Research Questions**

The set goal determined the objectives of the study:

- 1) describe electronic nomadism as a new form of human capital and behaviour algorithms based on the widespread use of mobile electronic devices;
- 2) to study the impact of the phenomenon of electronic nomadism on human capital;
- 3) to identify the specifics of the new form of human capital – electronic nomadism, its positive properties and possible risks in the interaction in the social.

#### **4. Purpose of the Study**

In accordance with the above, the aim of this work is to analyze the modern human capital in the conditions of widespread use of digital technologies in everyday life and the development of such phenomena as electronic nomadism. Modern innovative development of high technologies creates a request for special skills and competencies of the individual, capable of searching and analyzing information, interaction and communication in the virtual space. The answer to this request of the time was new modus of human capital-electronic nomadism, which became the purpose of the study.

#### **5. Research Methods**

The theoretical material is presented on the basis of analytical and dialectical methods, as well as the included observation, which allowed to combine theory and practice, giving a panoramic description of the impact of the phenomenon of electronic nomadism on human capital.

Statistical methods of data processing were also used in the work. Collected data for official statistics in Russia the share of Internet sales in total retail trade turnover in the period 2014-2017, the Results of processing these data is presented in figures 1-5.

Based on the existing work on the human capital, we will interpret it as a set of available individual knowledge, skills and motivations that contribute to the satisfaction of his needs and determine the life activity.

#### **6. Findings**

In modern culture, the requirements for the manifestation of human capital are increasing in all spheres. Another thing is that the development of civilization in the techno-information channel and, accordingly, techno-information turn has become a point of intense changes not only of socio-cultural space, but also of its subjects. A new kind of human capital – the ability to work in an electronic environment, which is associated with the emergence of such forms of identity as electronic nomadism. Let us emphasize that the electronic nomad freely addresses the technical achievements of mankind and begins to exist through them.

Among the skills required for electronic nomad will highlight the following. Numerous educational platforms are available on the Internet that allow you to remotely and independently obtain knowledge and education in almost any branch of knowledge. Numerous online simulators play the role of a practical base that helps to consolidate the theoretical skills of the nomad.

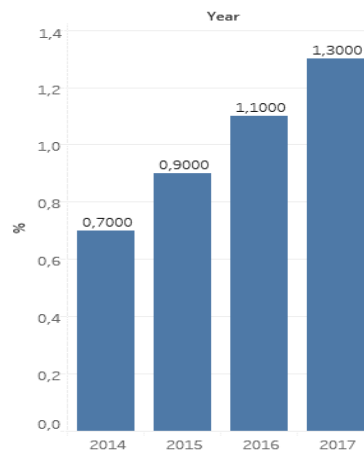
Nomad has free access to large amounts of information without his own reference to the location and time constraints. Due to this, the nomad is formed mobility and efficiency: it is able to instantly respond to requests, quickly search for information, analyze it, create new databases of information, sending them in any desired direction.

Nomad, flexibly adapting to current trends, can change their plans and points of their implementation, which helps to accelerate the processes. Access to the network and gadgets provide the nomad with everything necessary, leading to the fact that the satisfaction of daily needs does not take much time. Ordering of food, clothes, tickets, etc. can be done from the comfort of home.

Through the Internet, a nomad can create their own programs to facilitate activities, model the objects/situation, predicting the timing of their life/wear, etc. Nomad, “destroying nature, creates “man-made” space (possible worlds)” (Kutyrev, 2015).

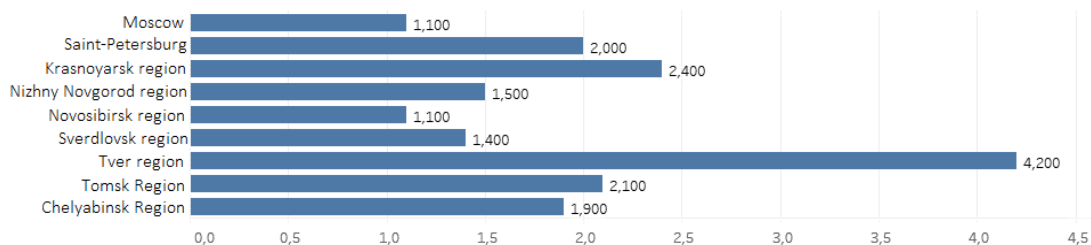
The Internet creates a huge communication space where nomads have free access to choose what they need and / or like. Thanks to communication in the virtual space, collaborations are created that promote effective cooperation of people and the birth of diverse projects.

Most of his life takes place in digital spaces affecting the metaphysics of personality. It is the virtual space that turns out to be the place where nomads exist, carrying out both the working process and leisure. This situation has a strong impact on the development of the economic sector. An increasing number of economic transactions are carried out in digital spaces. If we look at the statistics, the share of Internet sales in the total volume of retail trade has been growing in Russia since 2014 (Figure 01).



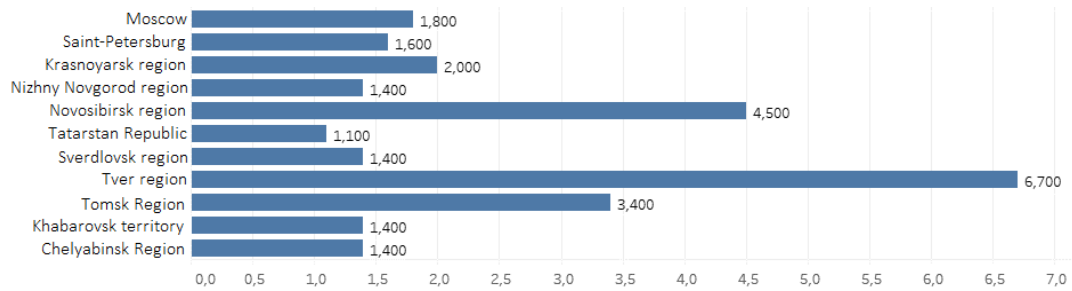
**Figure 01.** Share of Internet sales in total retail turnover, in Russia, 2014-2017.<sup>1</sup>

The leaders are the following regions of Russia, the share of sales through the Internet in the total volume of retail trade turnover in which is more than 1% (Figure 02), 2014. Figures 03-05 show similar data for 2015-2017.



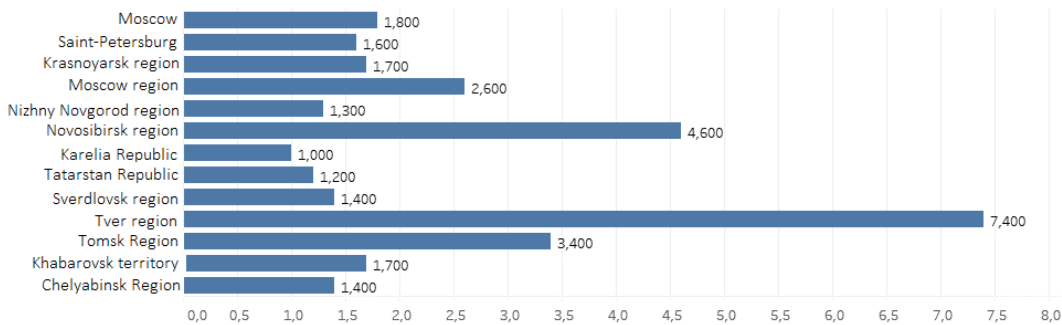
**Figure 02.** Regions of the Russian Federation, for which the share of Internet sales in the total turnover of retail trade is more than 1%, 2014

<sup>1</sup> Compiled by the authors based on the official website of the Federal state statistics service. URL: [www.gks.ru](http://www.gks.ru) (date accessed: 10.07.2018).

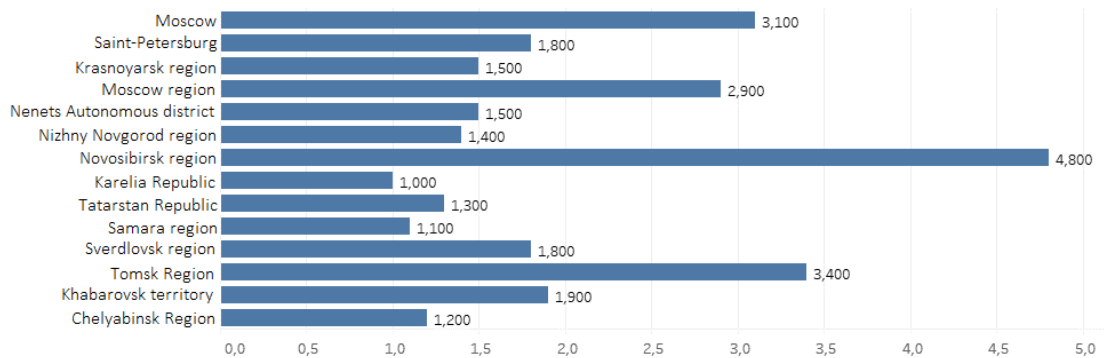


**Figure 03.** Regions of the Russian Federation, for which the share of Internet sales in the total turnover of retail trade is more than 1%, 2015

Despite the fact that the number of such leading regions increased from year to year, not all regions have linear dynamics in this indicator. For example, the Tver region, in 2014-2016, remaining in the lead, in 2017 showed only 0.6% share of trade through the Internet. Regions with such dynamics deserve special study of the reasons that led to a decrease in the share of trade through the Internet. Thus, despite the overall positive dynamics in the country, at the regional level, there is a variety of processes, and the dynamics of many of them is not clear.



**Figure 04.** Regions of the Russian Federation, for which the share of Internet sales in the total turnover of retail trade is more than 1%, 2016



**Figure 05.** Regions of the Russian Federation, for which the share of Internet sales in the total turnover of retail trade is more than 1%, 2017

However, based on the above data, it is possible to predict a further increase in the number of economic transactions in the network and increase their diversity. This is not accidental and is associated with a number of advantages, including mobility, choice, tracking of the process and its stages in the network (for example, delivery of parcels), failure in case of mismatch of expectations, the growth of the

number of offers in the network for the purchase of goods or services. So, a space for different kinds of economic operations will be expanded, creating the soil for the maintenance of electronic nomadism by promoting its interests and demands increase. Thus, as more human actions are digitized, the demands on the qualities of human capital that allow:

- to optimize the “wandering” of the electronic nomad on the Internet;
- to process the significant amounts of information that electronic nomads pass through themselves, facing them on the network, and begin to show attention to them.

Against this background, it is no coincidence that the increase in demand in developed countries for data processing specialists – data scientist, engaged in information mining. We believe that such specialists and their skills will become increasingly important for the personal human capital of the individual in the future.

But even today, the talent and foresight of foresight technologists determines the prosperity of the company and its capital. The modern economy develops according to the formula: consumer society (comfort) is capitalism (market) plus innovation of the whole country (Kutyrev, 2015), where one of the components of innovation is the electronic world, inventing and stimulating people's “need for needs”, thereby developing to an unlimited state of “will to consume”. The illusion of the possibility of choosing from the proposed variety, in reality, is imposed, which highlights the immaturity of the nomad. The choice of the electronic nomad is programmable: he did not suspect that he needed some services or goods until they were invented in the innovation and commercial centers, and advertising did not convince him of their perfect need (Kutyrev, 2015). The modern temptation / temptation of objects as a form of manipulation parasites on the unrecognizing nomad, constructing his false consciousness. The growth of (unconscious) nomadic needs leads to a crisis of culture, which is dominated by the cult of objects/things that devalue the subject. A key role in this process is played by money that acquires a virtual format. Their quantitative component, being an indicator of wealth, in the modern world evaluates everything (personality/event/thing). As G. Simmel noted, money is an effective invention of mankind, which does not require care, but gives symbolic power over the world: the more cultural functions money takes over, the stronger their power (cited in Vasilyeva, 2012). The economic dictionary defines the following functions of money as the universal equivalent, a special product, a form of expression of the value of all other goods: functions of means of exchange, payments, measurement of value, wealth accumulation, world money (Borisov, 2007).

Another significant feature of e-nomadism, which affects its economic behavior, is (spatial/temporal / social) freedom and the absence of borders. Space nomadic personality currently is the Internet, where virtually disappears the sense of time, evolving into a continuing-now. Any economic operation/transaction / communication can be carried out at a convenient time for the nomad. An increasing number of companies have software settings that operate around the clock and provide information about the status of the order. Moreover, the electronic nomadism is characterized by a young age. The modern generation due to the virtual space ceases to feel the boundaries, and communication in networks generally levels social/ national/ gender/ educational/ professional / cultural differences, turning the person into a freelancer, having the opportunity to engage in several activities simultaneously with any desired contact from the network.

Among the risks born of e-nomadism and negatively affecting human capital, we will call the low threshold of responsibility. Distance, lack of control, direct contact and even face-to-face acquaintance, anonymity and simulation played an important role in its formation, which leads to the manifestation of fraud, which does not entail any punishment. Thus, social engineering is becoming more and more popular, it is connected with psychological techniques of obtaining valuable information and using it for personal (selfish) purposes. For example, in 2015, the company “the Ubiquiti Networks” stole \$ 40 million, while no one hacked operating systems. As it turned out, the security rules were violated by the employees of the organization. Earlier in 2007, the offender took from the Bank “ABN AMRO” in Belgium precious stones for tens of millions of dollars, using not only information but also their own charm. At the same time, the low threshold of individual responsibility of the Bank's employees became one of the reasons for access to the protected storage of an outsider. According to the latest data, Kaspersky Lab experts have found that the attackers managed to steal more than 21,000 ETH with the use of social engineering over the past year.

It should be noted that while a person remains a part of the system, and high technologies are constantly improving, forcing the person to resort to sophisticated methods and methods of working with them, it is difficult to fight such violations in the usual ways, an important role is given to human capital. Along with the improvement of their own technical skills, nomads need to pay attention to the moral culture to minimize risks and the ability to recognize them in the modern world. Of course, to carry out such a thing in the modern world belongs to the category of utopias. However, the rapid response to the emergence of fraudulent schemes, their decoding and informing other nomads about it by replicating information is now quite an effective way to combat negative phenomena.

Another problem of human capital in modern times is alienation. Working remotely and performing a small part of the segment in the labor process, not having an idea of all its volumes, the nomad is not involved in the labor process. His only goal is to receive timely salary for work, where he has minimal responsibility, and to free up free time through the rapid implementation of the prescribed work.

The huge flows of information in which the electronic nomad lives lead to distraction, detachment from it and superficial viewing without understanding the essence. Nomad, constantly switching attention, does not know the information, is not able to interpret it, begins to make mistakes in the work. The above mentioned affects the analytical abilities of the nomad: only a small part of them is able to perform complex economic operations, predicting the promotion of goods in the market, its viability and further development. For example, despite the fact that the modern man “knows” about the presence of malicious mailings, that it is not necessary to follow suspicious links, however, he narushaet this requirement. As a result, according to analysts of the company Zecurion, in 2016, fraudsters with the help of social engineering stole from Russian Bank cards about 650 million rubles, and in 2017 the damage increased to about 750 million rubles. Being involved in an endless stream of information impersonal interaction electronic nomad makes mistakes: without going into details and interpretation of what is happening, it acts automatically, thereby becoming a victim of fraud. In such cases, theories about neuromarketing and personalization turn into losses for society, becoming a tool of scams.



## 7. Conclusion

In conclusion, we note the following points. The current stage of development has led to the expansion of the properties of human capital. Among the mandatory requirements of the time – the possession of high technology and the ability to operate through them, which led to the emergence of a new type of person – an electronic nomad. We emphasize that due to the expansion of the scope of high technologies, human capital itself is transformed, acquiring a virtual format. Against this background, in our opinion, the requirements for such qualities of human capital will grow, which will allow:

- to optimize the “wandering” of the electronic nomad on the Internet;
- to process significant amounts of information that electronic nomads pass through themselves, facing them on the Internet, showing them attention.

Among the required qualities of the nomad e-call mobility, efficiency, access to unlimited amounts of information, ability to model and predict by means of high technology, to create new communication links, to work in a comfortable mode, etc. But in addition to positive qualities, which significantly expands the scope of human capital, there are risks: the low threshold of liability, exclusion errors in the work. E-nomadism as an intensive productive factor of modern economic development affects the following aspects:

- increase in the share of the economic segment in the virtual space;
- positive dynamics of the share of economic transactions in the Internet;
- the emergence of risks with a moral aspect and due to anonymity, a low threshold of personal responsibility, the creation of fraudulent schemes;
- development of new fraudulent schemes based on social engineering.

The mentioned aspects related to the emergence of a new form of human capital – e-nomadism-are quite dynamic and unstable, which creates a platform for further research of the problem and forecasting its consequences.

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