

HUMAN CAPITAL AS A FACTOR IN THE FORMATION OF HOMO ECONOMICUS: A SOCIAL ASPECT ON THE EXAMPLE OF THE PRC

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ABSTRACT

The accumulation of human capital in modern society is universally recognized as the main driving force of the development of modern economic systems. It is based on the emerging image of 'Homo economicus' which has a leading role. In the social sciences, this phenomenon is interpreted in a narrow sense, without taking into account the connection with the 'social man', 'environmental man', 'anatomical man', etc. The present research explores the impact of this approach on the example of the PRC and other countries of Southeast Asia on the level of suicides among students. Collecting and processing information, the authors used monographic and statistical methods of analysis, as well as expert estimates and extrapolations. The research allowed clarifying the content and relationship of the concepts of human capital and H.economicus; establishing basic principles for the formation of human capital and their impact on 'behavioral lines'; identifying the main reasons for the high level of suicides occurring in the process of accumulating human capital in China and describing the main directions for overcoming them. The research revealed that to minimize the negative manifestations of the relationship between human capital and H.economicus, it is necessary to involve scientists from other fields of scientific activity, in particular: anthropology, medicine, ergonomics, ecology, etc.

Keywords: Human Capital, H.Economicus, Behavioral Lines, The Educational Process, The Cost of Education in China, Economic Growth

INTRODUCTION

Accumulated knowledge and productive abilities of the population used in economic activity" (Nelson, Phelps (1966) combined into a single category – human capital – are recognized by the scientific community as the determining factor in the evolution of mankind. In a static sense, human capital forms the image of 'Homo economicus' – an economic person, the main element of modern theories of 'behavioral lines' (Kuznetsov & Umilina 2015) who uses "labor or resources in market conditions in own interests" (Political science. Dictionary. Economic man). This process in various countries demonstrates inexplicable phenomena in terms of goal-setting – first, an increase in the number of suicides among schoolchildren and students associated with the educational process and with their inadequate psycho-emotional state. The families and parents of the students, who for the most part are ready to make big sacrifices to ensure a competitive level of education for their children, also face problems. These phenomena are traditionally most vividly observed in the countries of South-East Asia, in particular in China, whose economy is taking the leading positions in the world thanks to the

high level of education. Despite the fact that the PRC government carefully monitors the level of the wage gap between highly skilled and low skilled workers in the Chinese labor market (Lien, Wang & Zheng, 2016), the struggle for the most profitable jobs is becoming an environment for social negativity. At the same time, a motivated increase in the requirements for the level of knowledge among applicants simultaneously forms (World development report on thinking, society and behavior) their negative reaction to what is happening on the basis of “thinking based on mental models”. In this regard, the present research aims to identify the main reasons for the growth of suicides in the process of forming human capital and ways to minimize their negative economic and social consequences for society. The following tasks were solved:

1. the scientific interpretation of the content and the algorithm of interaction between ‘human capital’ and ‘*H.economicus*’ was clarified;
2. the reasons for the exponential growth in suicides among young students in the PRC and the countries of Southeast Asia were established;
3. the reasons and level of social tension (against the wish to acquire a prestigious education) among the owners of ‘human capital’ and in their families (ready for any sacrifices for the sake of prestigious education for their children and building the corresponding ‘behavioral lines’) were investigated;
4. the research revealed that increased tension in the learning process is largely due to uncertain requirements for the quality of education.

MATERIALS AND METHODS

In the absence of a unified scientific understanding of the content, relationship and interdependence of ‘human capital’ and ‘*H.economicus*’, as well as of a relevant forecast of the economic, environmental and social consequences of this, the struggle on the national and world markets for the physical and intellectual capabilities of potential workers is nevertheless intensifying. Within the current paradigm of the market economy, this struggle is subordinated to the main goal – to maximize the economic benefits of both the carriers of human capital and the employers who use it (Telizhenko), using the totality of "accumulated professional knowledge, skills and abilities obtained in the process of education and advanced training". These benefits can appear "in the form of wages, interest or profit" (Smith, 2007; Kumekhov 2017).

As a complex of intellectual, spiritual, and physical abilities, human capital can be used with more or less intensity and efficiency, but in all cases it is presented as the main factor of labor activity (Komarovskaya, 2016). In other words, the impact of human capital on total income is viewed “as a decisive factor in promoting the adoption of new and more productive technologies” (Acemoglu & Angrist, 2000). Such traditions have long roots and are highlighted by the American economist T. Schultz (1967), as well as R. Nelson & E. Phelps (1966) who considered human capital as a labor force.

Therefore, it is no coincidence that obsession with the pursuit of education and the expansion of professional competencies is beginning to generate social negativity, comparable in scale with global threats. Certain scientists already say that “the world is racing towards the abyss” (Chomsky). In this regard, the effective use of human capital is impossible without constant and comprehensive research of both its essence and negative effects, which, along with the ability to generate benefits, increase the level of threats.

It is advisable to subdivide the negative effects of human capital development into two groups:

1. Natural and ecological
2. Socio-demographic.

Recent alarming results of studies of the natural and ecological consequences of human development along this path were presented to the world community (Nature’s dangerous decline...) by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem

Services (IPBES), created at the UN.

The negative social manifestations of this process are less studied. In particular, it is not known how this process is reflected on the psycho-emotional and moral state of both the owner of human capital and their relatives participating in this process, and having their own:

- Needs and interests;
- Worldview, spiritual wealth, morality, status, social role, personality orientation;
- Status, performing certain roles and influencing social choice.

Together with the ability to generate benefits, they determine the model of behavior and the place of a particular person in society. Despite the fact that there are no methodological limitations for constructing a theoretical model of a person as the owner of human capital" (fresco), its manifestations can be observed in:

- Maintaining the conditions and circumstances of social and economic order;
- Formation and adherence to the principles of making economic decisions;
- Recognition of the system of economic relations in society;
- Finding ways to solve problems of economic choice, etc.

Thus, it can be argued that human capital is inseparable from another essential category – *H.economicus*. The model of an economic person in this context is focused on the economic behavior of a person in a social environment that characterizes the process of socialization. The critical mass of facts accumulated in the scientific community indicates that the study of the human model and the accumulation of human capital needs to take into account the anthropological foundations of human existence, including not only intelligence, imagination, and character but also the attitude to nature and social environment.

RESULTS

The social negativity of the formation of human capital is most clearly manifested in China, known for its reverent attitude towards education, the traditions of which have deep historical and cultural roots laid down in 605 AD by Emperor Yang of Sui, which operated until 1905, until they were abolished by the Guangxu Emperor from the dynasty Qing (<https://baike.baidu.com/item>). This was the only social ladder along which talented people from the commoners could get into the ranks of government officials.

In modern, industrial China, provinces need a large number of specialists with higher education. Their growth is constrained by the weak volume of secondary education (Li, Yun & Lui, 2014). In addition, “defining the boundaries of ownership of human capital is often the main reason for differences in economic efficiency” (Xianguo & Le, 2014) of state and village enterprises.

In addition, the negative aspects of the educational process in China were investigated by the international research centers Financial Times-Chinese and British Council in December 2018 (China family childhood...).

In their ‘Research report on the education of children and the training of international specialists in China in 2018’ some of the theses are highlighted, in particular:

“*University education has become the basic level of education required*”. According to surveys, all parents want their children to have a university education or even a higher level of education, and in addition to half of the respondents who want their children to receive a bachelor's degree, 40% of parents expect that their children will receive a master's degree and 10% would like their children to receive a doctorate;

“*Education is the most important ‘investment project’*”, therefore parents are ready to invest even at the cost of great sacrifices (Release and interpretation...). In terms of finances, 52% of parents cut their personal spending on recreation and entertainment, and 43% of parents

said they worked extra or part-time to get a higher income. At the same time, 51% of parents gave up their hobbies and personal time, and 20% of parents quit or changed their job in order to devote more time to their children. In addition, 33% of parents purchased housing for their children in the school district, 26% of parents changed their place of residence to educate their children, and 27% of parents maintain a special social circle for the needs of their children;

High demand for non-public schools. The share of non-state schools of primary, incomplete and complete secondary education within the country increases, yet the number of students studying abroad in international schools also grows, from 11% to 14%;

Tutors, trainings and workshops have become the norm. 81% of respondents have children attending additional classes and workshops, among which English courses are the most popular (42% offline, 23% online). In addition, 37% of the parents surveyed have children attending art classes, and 29% – sports sections.

In the field of university entrance examinations, a whole production chain has been formed, including prenatal education (Zorin, 2014), kindergarten (additional classes), primary school (additional classes), secondary school (additional classes), ‘brain nutrition’, assistive software for testing and analysis with the help of artificial intelligence, etc. All this serves the sole purpose of entering a university.

In December 2017, the China Research Institute of Education Finance at Beijing University published the first China-wide survey of family spending on education (Conducting policy-based education...). It was found that investment in education is the main family expenditure, and in 2016-2017, the total expenditures of Chinese families on basic education of children were equal to 60% of all government budgetary allocations to education.

China has K12, a 12-year system of basic education including primary, middle and senior classes (age range 7-18) (Chen, 2010). Currently, the population in the K12 stage is about 180 million and is expected to reach 221 million by 2020. The huge population of the appropriate age laid the foundation for the development of this system, and K12 accounts for the lion's share of investments against the background of general investment activity in the education sector.

If we consider the segments of the educational industry, then in terms of investments, K12 is on top. In the first half of 2017, investments in this segment amounted to almost 1.5 billion yuan, or more than 30% of all investments in education (China: Investment in education...). On this topic, Zhiyan Consulting published the ‘Report on the study of the development structure and investment risks of the Internet + education informatization industry in China in 2018-2024’ (Zhiyan Consulting...).

In 2020, the population to be trained in the K12 system will exceed 200 million, and the market size in monetary terms will exceed one trillion yuan.

According to statistics, in the primary and secondary education market, the average per capita expenditure is 5121 yuan per year, of which 21% is for tutoring services, and 18% is for online education. 40% of parents spend more than 5,000 yuan per year on extracurricular education of their children, 15% of parents spend more than 10,000 yuan annually for this purpose.

Assuming that by 2020 the population to be trained in K12 is 200 million and per capita spending is 6,000 yuan per year, conservative estimates suggest that the K12 education market will exceed 1.2 trillion yuan in 2020 (market volume of the education system K12 is billion yuan) (Zhiyan Consulting...).

Thus, under the influence of traditional concepts and the emerging market situation, parents are ready to invest maximum efforts and resources in teaching children. Despite the severity of this burden, according to the 2016 survey, 91.1% of parents from middle-class families are not content with spending only on basic education and are ready to invest additional funds; 60% of parents are very enthusiastic about investing in education, of which 38.9% are willing to invest more in order to improve the efficiency of studies, and 21.1% say the price does not matter at all.

Education costs required do not matter	21.1%
Costs can be increased if beneficial	38.9%
One should spent on priority education needs	15.6%
One should spend whenever possible to ensure a good life for the child	15.6%
Investing only in basic education is enough	8.9%

With regard to choosing the location of educational products, cities differ in terms of educational resources – the best teaching staff is concentrated in the most developed cities (<http://www.chyxx.com/industry/201711/582547.html>). In the Chinese industrial chain of entrance examinations, there is a special concept ‘housing in the school district’, in accordance with which the key elementary and secondary schools admit children living within a certain territory – the school district. They can be enrolled without examinations for compulsory education in a specific district school. Every parent strives to acquire a home in an elite school district and hopes that their child will be stronger than them. Often such housing is not suitable for proper living and only serves as a pass to the coveted school. Therefore, even the most dilapidated and tiny apartment can cost a fabulous fortune, creating a gap in the family budget and increasing the already high degree of social tension.

DISCUSSION

Because of high parental expectations and the pressure of the school curriculum, Chinese students are some of the most burdened in the world. According to a national survey published by Beijing University Child and Adolescent Health Research Institute in January 2018, 1 in 5 (20.4%) high school students thought about suicide, and the main reason for suicide is school overload.

The 21st Century Education Research Institute, a non-profit organization, published the Blue Book of Chinese Education in 2014, which states that the entrance exam system has led to a number of schoolchildren's suicides. In 2013, there were 79 suicides among primary and secondary school students, of which almost 93% were due to humiliation by teachers or excessive workload. Moreover, every year there are cases of suicide of applicants who failed in the entrance examinations (Asian countries are opening...).

The statistics of suicides, one way or another connected with education in other countries, does not look comforting either. Thus, according to a study by Hannah Ritchie, Max Roser and Esteban Ortiz-Ospina (<https://ourworldindata.org/suicide>), the number of suicides in the world on this basis was 793,823 cases. “The lowest rates of suicide in the world are concentrated in the Caribbean, Bahamas, Jamaica, Grenada, Barbados, Antigua and Barbuda - from 0.8 and 0.5 suicides per 100 thousand people”. At the same time in South Korea, along with suicides among older people who are not being helped by their children, the statistics of suicides among students who are under strong pressure to achieve academic success look depressing. However, "the use of alcohol, lack of sleep, stress and poor social relations can put students at an increased risk of suicide."

Thus, establishing an objective relationship and interaction of human capital and the model of *H.economicus* from the point of view of the functioning of economic systems affects the most sensitive aspects of social well-being and should answer a number of questions, in particular:

- what are the prospects for the functioning of the consumer model of the market economy with the obvious limitedness of the main elements of the resource potential with the simultaneous and uncontrolled growth of the planet's population and migration processes that increase the level of competition, and how does this affect the psycho-emotional state of the population?
- what is the ultimate goal of the concept of innovative development through the accumulation of human capital and focus on endless growth in consumption and increase in labor productivity? In this regard, the

current concept of development seems at least irresponsible, since it is impossible to strive for anything without imagining the ultimate goal of this development;

- what is the final model of *H.economicus* and how does the market concept of human capital fit into it? (Kamenetsky 2014).

From the point of view of the authors, like any other dynamic model, a human model should have clear limitations determined based on the balance of its constituent elements which interact in a strictly defined algorithm developed based on accumulated human capital. The elements, in interaction with which *H.economicus* appears in the process of accumulating human capital, should include natural resource potential and habitat, as well as the economy itself (Lazarev, Shashlo & Kuzmicheva, 2016). The diagram of their interaction is shown in Figure 1.

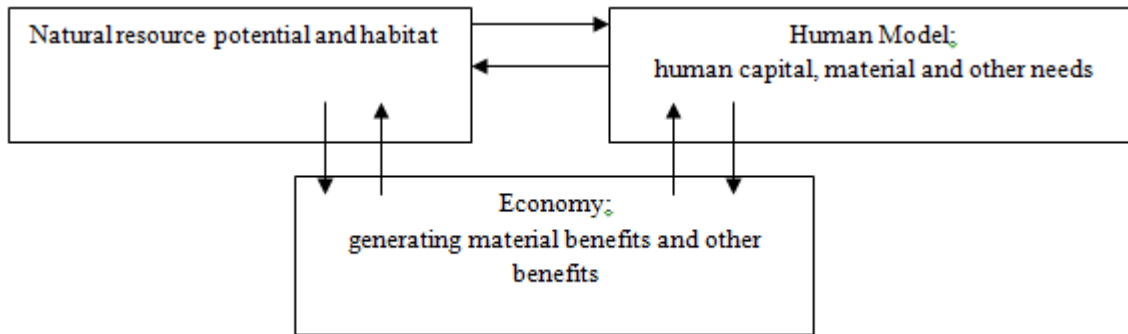


FIGURE 1
ALGORITHM AND SCHEME OF INTERACTION OF ELEMENTS OF THE ECONOMIC MODEL

When analyzing the interaction algorithm of these elements, first of all their cyclical nature is noted, which presupposes their dialectical unity. In terms of content, these are:

1. The connection between satisfaction of human needs with natural resources that do not require additional processing, and the environment. The level of their consumption cannot exceed scientifically grounded limits, which will significantly reduce tension in the process of accumulating human capital;
2. Restoration of a part of the resources consumed by society which are not provided by the natural self-regulation systems of the natural environment;
3. Consumption of natural resources to generate material and other benefits, the volume of which should not exceed the established limits;
4. Replacement of consumed resources up to the level of natural balance;
5. formation of an order for material and other benefits based on the anthropological needs of a person, the volume of which should not exceed the established limits;
6. Consumption of goods based on the principles of wastelessness and expediency.

Failure to understand the need for a scientific interpretation of the content and algorithm for the interaction of concepts such as ‘human capital’ and *H.economicus* and balance between these elements is the primary cause of the negative consequences of the accumulation of human capital, which include:

1. Exponential increase in the number of suicides among young students in the PRC – a region with a special mentality and cultural traditions against the background of an unbridled desire for education to obtain economic benefits;
2. Increase of social tension, both among the owners of ‘human capital’ and in their families, ready for any sacrifices for their children to receive a prestigious education;
3. increase in the level of global natural-ecological and social threats, one way or another affecting the psycho-emotional state of the carriers of ‘human capital’;
4. Uncertain nature of the requirements for the quality of education, and increase in the level of tension in the learning process.

CONCLUSIONS

As a result of studying the educational system as the main factor in the formation and accumulation of human capital in China, the authors established:

1. The content and interconnection of the concepts ‘human capital’ and *H.economicus* is formed within the framework of the economic system, the constituent elements of which demonstrate a cyclical relationship;
2. The need for constant replenishment of ‘human capital’ to obtain economic benefits is formed by the corresponding ‘behavioral lines’ which for various reasons lead to an increase in the number of suicides;
3. Workloads in the education system, both in China and in other countries, should take into account the psychological and physical health of students;
4. share of education expenses in the family budget should be determined taking into account other necessary expenses and should not lead to an increase in social tension;
5. Basic principles of the formation of ‘human capital’ and their influence on the ‘behavioral lines’ include:
 - a. principle of dialectical unity of all the constituent elements of the economic model in which human capital is formed;
 - b. principle of objectivity (associated with the external conditions in which human capital is formed) which presupposes an impartial and impartial attitude to reality;
 - c. principle of balance of all the elements of the economic model, which form the directions of human capital development and behavioral lines, the observance of which is the main condition for its stability;
 - d. development based on the observance of the priority of spiritual values, where human life is recognized as the highest value, and material and other resources are aimed at making this life as comfortable and safe as possible, while respecting the environment that does not violate its natural self-regulation systems.

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