Abstract: The article deals with theoretical aspects of human capital, features of human capital, problems and prospects of human capital in modern conditions. Problems and challenges of ontology and functioning of human capital in postmodern society are outlined. The current state of investment in the reproduction of human capital and its development was assessed. One of the ways to increase human capital is to invest in people, their health and education. The article substantiates the role and importance of investments in human capital at the family level. The sharp increase in interest in the creative abilities of a person and in the ways of their formation and development confirm the obtained results. The international significance of the article lies in the objectification of the problems of human capital in developing countries (using the example of Ukraine), taking into account the global industrial, cultural and social context. In order to optimize human capital management on the verge of the postmodern and post-post era, these research results can help in the development of scientific, public and government programs and activities.

Keywords: human creativity; postmodern society; investment in people, their health and education; development prospects; human capital at the family level; human capabilities; creative abilities of the person.

Introduction

Investing in a person, his/her health and education is one of the ways to accumulate human capital. On the other hand, in the context of a postmodern society, the devaluation of values, the role of leadership, the authority of labor and social hierarchies pose new challenges to the functioning of human capital and require new approaches to investment and management.

At the present stage of development of Ukraine, which is integrating with a delay into the world culture and economic space, the study of the problem of human capital is quite relevant. The publications of domestic and foreign authors provide theoretical and methodological foundations for such a study. Much attention to the problem of investing in human capital was paid by such scientists as (Bohunya 2000; Borschch 2005; Kolot 2013; Korovsky 2004) and others. Noteworthy are the works of such foreign scientists as (Becker 1993; Dobrynin et al., 1999; Sharp et al., 1997). These scientists studied the impact and ways of increasing the efficiency of the use of human capital, which is implemented in modern conditions, as well as in the structure of socio-economic research is promoted to the category of priority tasks. However, despite the extreme importance of a theoretical analysis of the role of human capital, these issues have not received due attention in economic research yet.

The purpose of this article is to outline the problems of the existence and functioning of human capital in a postmodern society. In this regard, it is necessary to study the features of the formation of investments in human capital. According to this goal, it is necessary to solve a number of tasks: to analyze the theoretical aspects of the development of human capital; determine the impact of investments on the formation of human capital; to reveal the features of human capital in Ukraine.

The object of this research is human capital as an element of the investment environment. The subject of the study of investment in human capital and the contradictions that arise in connection with this are economic relations. The methodological basis of this article is formed by the fundamental concepts provided in the works of foreign and domestic economists who have significantly contributed to developing the theory of human capital.

Research methods are the following: dialectical - is used to reveal the theoretical aspects of the development of human capital and the characteristics of human capital in Ukraine; methods of analysis and
Specific Features of Investment in Human Capital in the Postmodern Society
Valentyna KHACHATRIAN, et al.

synthesis - are used in assessing the state of investment in the revival of human capital and its development in determining the problems and prospects for the development of human capital in Ukraine. Among the special methods used is the method of ranking the levels of investment in human capital; method of comparing statistical indicators for different years and monitoring its dynamics. Qualitative methods were also used, namely: a) extrapolation of postmodern philosophy to traditional approaches to human capital; b) deterministic analysis (fact-finding) between the facts of the formation of human capital; c) transformative analysis (objectification of the modification of the essence and tendency of human capital).

Theories of human capital in the context of scientific ideas about the content and forms of productive human forces

Human capital is a formed or developed definite reservoir of health, knowledge, skills, abilities, motivations accumulated by people (a person).

In the works of such outstanding scientists - economists as A. Smith (1956), K. Marx (1992, 2014) and others, theories of human capital began to form in the 18th century in the context of scientific ideas about the content and forms of human productive forces. Until the middle of the 20th century, the theory of human resources did not exist as such, since the objective prerequisites for the development of the productive forces caused by the scientific and technological revolution had not taken shape yet. It was in the conditions of technological progress that the role of human began to grow rapidly in all spheres of life.

1. Adam Smith came to similar conclusions about the human influence on the country's economic growth. He considered human ability to be part of social wealth, because human skills contribute to the growth of both social wealth and the wealth of an individual. A. Smith (1956) justly noted that “the acquisition of such abilities (training always requires significant expenses) that represent the main capital, which is realized in his personality. Being part of the human wealth of a certain person, these abilities become part of the wealth of the society to which this person belongs ”(Investments in Human Capital).

The Marxist theory views capital from a social-class position. K. Marx (1992, 2014) in his work "Capital" notes that production is a product of human labor, generated equally by the muscles of the human hand and the brain. In the same work, Marx (1992, 2014) defines the concept of "hard labor", which is the power of easy labor, this comes from the use of technology to help human labor.
The concept of human capital in economic literature is considered in the broad and narrow sense. In the narrow sense, one of the forms of capital is education. It is called human because this form becomes part of a person, and capital is the result of the fact that later it will be a source of future pleasures or future earnings. In the broad sense, human capital is formed through investment (long-term investment) in a person in the form of expenditures on education and training of the labor force in production, on health care, migration and the search for information on prices and incomes. 

2. Investments in human capital are aimed at enhancing one's professional capabilities and, therefore, professional performance.

There are different types of investments. First of all, of course, these are expenditures on education (general, special, formal, non-formal) and on-the-job training. They are the most obvious, most widespread and probably the most important type of investment in human capital. Education forms workers who become skilled and productive. Health care spending is also important. Health is the result of spending on disease prevention, medical care, dietary nutrition and improving living conditions, increasing life expectancy, working capacity and productivity. Finally, there are the costs of mobility, through which workers migrate from places of relatively low productivity to places of relatively high productivity. Thus, it increases the results of using its human capital. In accordance with the main assets of human capital, in addition to those mentioned above, investments also include the costs of searching for economically significant information, raising children (investing in future human capital), etc.

Of all types, the most important investment in human capital is investment in health and education. It must be noted that general and special education seek to expand one’s knowledge and, consequently, increase the quality of human capital. Investment in higher education enhances the level of specialist training and, thus, positively affects the rate of economic growth, Borshch (2005). Per capita, the average amount of investment in education in Ukraine increased from UAH 41,420 in 2012 to UAH 97,331 in 2020. There is an intensive growth in expenditures on all types of education of the Ukrainian population. In 2012-2020 expenditures on general secondary education (20 times) and on vocational education (15 times) increased rapidly.

Together with education, the health sector is the most important investment. This leads to a reduction in diseases and mortality, the continuation of one’s working life and the functioning of human capital. The state of human health is his natural capital, part of which is hereditary, and...
Specific Features of Investment in Human Capital in the Postmodern Society
Valentyna KHACHATRIAN, et al.

the other is acquired, as a result of the costs of the person and society. During a person's life, the wear-and-tear of human capital occurs. Health investments can slow this process down.

The system of sources of investment in human capital shows that the corresponding investment is carried out at 4 levels, namely:
- personal - for the formation of the human capital of individuals;
- micro level - for the formation of human (labor) capital of business entities;
- meso-level - for the formation of human capital in regions and industries;
- at the macro level - for the formation of the total human capital of the country, Hrishnova (2001).

Taking into account that investment in human capital should improve the living conditions of the population, this financing should be carried out in certain areas of human development.

The source of investment in human capital can be state authorities, non-governmental organizations, individual companies, individuals, international funds and organizations, educational institutions.

According to the State Statistics Committee of Ukraine (n.d.), it can be seen that the state budget is used to finance health care, spiritual and physical development, education, social protection and social security, environmental protection and housing and communal services.

At present, the role of the state in this area is quite large. The state resorts to both coercive and incentive measures. Compulsory measures include formal education that is compulsory for all (secondary school), compulsory medical preventive measures (vaccinations), etc. However, the main orientations are incentive. The government has two effective ways that are used to change the size of private investment in a person, which are automatically carried out through the market: they can affect the incomes of those who work (through the system of taxes and subsidies), and they can also regulate the price of acquiring human capital (adjusting the prices of the resources used).

3. For a long time in Ukraine, the analysis of the effectiveness of the use of human resources is carried out through the category of "labor potential". Certain qualitative characteristics are improving: the proportion of the population with higher education is increasing; computer literacy is growing; the ability to work in a market environment is formed; entrepreneurial activity is increasing. At the same time, processes are taking place in Ukraine that lead to its destruction. Population growth rates are not growing, as a result
of which its structure becomes more pronounced depopulation format: health indicators of people of all age groups are deteriorating - over the past 10 years, the number of newly registered diseases has increased by 2 million cases, or 7%; the intensity of labor emigration of the able-bodied population is increasing - according to expert estimates, today more than 7 million of our compatriots work abroad; the indicators of population aging are growing - in 2014-2020, the number of people over 60 years old reaches 21.7% of the total population (among women - 26.0%, men - 16.8%), while there are 438 people per 1000 people of working age retirement age, Becker (1993).

Among the main reasons for these trends are the spread of poverty due to insufficient and sometimes unreasonably low wages, especially in rural areas; ineffective system of vocational training, advanced training and retraining of specialists in working specialties; unsatisfactory state of medical services for the population and low efficiency of measures to improve health care and labor, etc. All this gives reason to expect that the shortage of personnel in the near future may become a significant factor that will slow down the further development of the country’s economy and, accordingly, increase the well-being of Ukrainians.

Problems of human capital in the postmodern period

Green and Roberts (2012) studied the influence of postmodernism in the practice of public sector management and came to the conclusion: postmodern consciousness has deformed the consciousness of the social role (including the labor one); even at the level of the federal governments of the leading countries, the postmodern consciousness of ordinary workers led to recruiting challenges; for the next generation of workers, public employment with a full social package is no longer an absolute value (Green & Roberts, 2012). They can get a similar social package in other ways, realizing their rights and multimodal opportunities. The authors propose strategies for aligning federal plans for the relationship of human capital to the values and needs of ordinary employees.

In the era of postmodernism, the problems of using human resources are considered in the aspect of management, loyalty, gender equality, leadership (Nerubasska & Maksymchuk, 2020; Nerubasska et al., 2020). The last aspect is given the greatest attention, since the problem of leadership requires the recognition of authority, while in a postmodern society the opposite happens. The problem is elucidated using both classical and postmodern methods of critical deconstruction. D. Green, using
transactional analysis and theories of transformational leadership, examines
the theory of leadership in the context of postmodernism. The main
postulate is the constantly changing nature of the workforce in the same
changing environment, which only exacerbates staffing problems. The
author offers five strategic directions for solving the problem, which can be
found in his publication "Leading a postmodern workforce" (Green, 2013).
Among the main challenges of the postmodern technologized society, the
author sees the following: mass refusal of people from physical labor due to
technologization and robotization; changes in the demographic situation;
devaluation of labor as a social value, etc.

Some scholars give empirical examples of the fall of corporate
culture in relation to the leader: employees' trust in the leader is not in trend,
 everyone is trying to be autonomous and independent (liberalization). The
efficiency of the corporate labor system is becoming less and less, especially
in crisis situations, and now it is a global threat and requires management
revision. An analysis of the theoretical sources of scientists who are
representatives of various states showed that the governments of the leading
states are concerned about the crisis of human capital and are now looking
for ways out of it (Blunt, 2003).

Another resource problem of human capital, which concerns the era
of the end of postmodernism in Western Europe and the USA, is that due
to the increase in life expectancy, an increase in population (especially in the
USA) and the expansion of human rights. This has led to the fact that for
the first time in history, representatives of four generations can work in
parallel at enterprises. Moreover, the attitude of new generations to life
values and work is sharply discordant with the opinion of older generations,
which ultimately creates managerial and personnel problems. K. Harding
characterizes the new contingent of human resources: “This new type of
worker is guided by a new set of values and expectations regarding work.
For example, employees who are extremely important are viewed by
companies as vacancies. In one study, Emergent employees (88%) believed
that loyalty was not related to length of employment, while traditional
employees (94%) viewed loyalty as a willingness to stay with an employer for
a long time” (Harding, 2000).

Liberalization and multimodality of personal spiritual and material
searches of a person of the late postmodern era and the beginning of the
post-post era is characterized by the appearance of a reluctance to work in
difficult, unregulated or urgent types of work. The workforce also strives for
a more spiritual workplace that emphasizes personal integrity and responsibility. This creates production, communication and management obstacles on the way to the efficiency of labor and management, which causes a decrease in productivity and increases the amount of information entropy, especially for large enterprises: in corporations, factories, multinational companies. In the latter, national, cultural, traditional anthropological differences also function destructively. Such problems are most acute in collectives where work is associated with stress, risk, significant separation from civilian life (police, army, etc.) (Washington, 2002).

In the era of the end of postmodernism, human resource management is complicated by the multimodality of life priorities and styles of both subordinates and their nominal leaders. From a management point of view, leaders implement not standard, but personal styles of leadership, which violates the universality and consistency of the functioning of organizations (Hackman & Johnson, 2018).

In addition, the so-called "retirement tsunami" is observed throughout the Western world, China and Japan due to the increase in life expectancy of the third age, which entails not only a demographic and industrial, but also a cultural "shift". This requires new strategies for managing workers and non-workers in the way of recruiting, securing and personal feasibility.

It has been historically proven that the well-being of people, their health and the subjective experience of happiness and satisfaction determine the quality of human capital, especially in modern times. Understanding the health of human capital as a resource for the development of society in the postmodern era has slightly different aspects. If in the 17th - 18th centuries in Europe significant economic instability was observed due to the spread of various diseases and a low standard of living, then in the 19th - 20th centuries with the improvement of health care, pharmacology, etc. this factor receded into the background (Mihalache, 2019). Firstly, health began to be considered much broader (as a subjective state of multidimensional well-being), and secondly, mental factors of maladjustment, stress, rigidity to rapidly changing conditions came to the fore in a globalized and informatized society. This requires government agencies to contribute to the optimization of spiritual health in order to preserve and increase human capital, which would be motivated to act and participate, and not be limited by their own life style and meaning. I. Mihalache admits that in the way of
valeological influence, human capital of the XX - XXI centuries has an expressive subjective and objective side: "The importance of the topic stems from understanding the health of human capital as a resource for the development of society, and not as a consumer of resources; at the same time, it is necessary to understand the role of an individual decision in managing one's own health. In addition to an individual point of view on health, its subjective perception and making individual decisions on the choice of such behavior, the state can be an important factor in ensuring the functioning of national health systems" (Mihalache, 2019). In this case, optimistic forecasts are given, since, on the one hand, the level of medical care has increased significantly, on the other hand, a non-medical (social) model of health is now adopted throughout the world, which opens up new opportunities for comprehensive support, recreation and preservation of human resources. We can summarize: the crisis in providing society with human labor capital is minimally associated with valeological, hygienic and medical factors.

Thus, postmodern challenges have a significant impact on the quality of labor capital and require immediate responses from administrative state structures, local authorities and leaders of enterprises.

**Human capital formation processes**

The processes of formation of Ukraine's human capital in reality pose certain risks that weaken the principles of national security. At the same time, those that are critical deserve the most attention, namely:

- deepening the incompatibility of the professional and qualification structure of labor supply and demand for it. In addition to the actual professional and qualification incompatibility, one can observe the inability of the national labor force to comply with the requirements of the postindustrial-oriented model of the Ukrainian economy. This refers to: low levels of economic motivation among the labour force; psychological unreadiness for instability and mobility; over-individualization of social and labor relations. In this regard, Ukraine's choice of its place on the “post-industrial core - pre-industrial periphery” scale depends on the quality of the nation's human capital and the validity of actions to form its cultural and civilizational identity;

- the deterioration of the situation with the formation of human capital negatively affects the level of provision of the Ukrainian economy with qualified personnel, this also hinders the improvement of its structure.
It means that this process is undermined not only by the deterioration of the demographic situation and the qualitative characteristics of human capital, but also by the lack of a clear gear for regular improvement of labor skills and knowledge. On the one hand, they are subordinate to the harmonious development of the individual, and on the other hand, to the development of civil society and increase the competitiveness of the national economy. At the same time, under the pressure of globalization processes, breaks of sectoral production ties of the national economy, this leads to a distortion of the sectoral structure of Ukraine, and hence the employment of its population. Today, production only nominally corresponds to foreign counterparts, but in terms of its commodity structure, the total output is increasingly shifting towards raw materials and semi-finished products of a low level of processing. It is significant that with an increase in economic activity and GDP growth, the most competitive products of most Ukrainian markets are of non-domestic origin. Undoubtedly, this trend negatively affects the formation of human capital and its qualitative characteristics;

– replacement of national emigrants by immigrants who have a different pattern of work behavior. Uncontrolled migration poses threats associated with the very scale of the processes, forms the risks of exposing the age and professional reproduction contours of the system for supporting labor competencies, on the basis of which the current structure of the Ukrainian economy is formed. Even taking into account the incomplete correspondence of the economy to the needs of post-industrial development, one should not expect that immigration will be able to solve these problems. The risk is that free niches and just a shortage of labor will join the ranks of ethnic groups with pre-industrial priorities of labor and general culture. In the absence of a clear orientation of the economic complex of Ukraine, immigrants will influence not only the level of unemployment and the level of payment of the local population, but also the formation of a network of organizational structures, reflecting archaic economic models;

– polarization of labor inequality. In Ukraine, its own social groups are being formed for certain types of labor and labor activity. In the long term, these processes, contrary to the needs of the effective economic and social development of the nation, threaten productive and unproductive polarization, as well as prestigious and non-prestigious jobs. In addition to social tension, such structuring suppresses the potential for breakthrough growth of post-industrial skills and labor practices, professional mobility and
constructive competition. As a result, the social structure of Ukraine's human capital can turn into an unshakable system of rent-forming statuses and castes;

– dispersal of national centers of concentration of intellectual and cultural capital. The formation of a global virtual space increases the mobility of an intellectual product to the level when the need for its territorial belonging to the places of implementation in material production is lost. As a result, the system of functions of research and development (R&D), management, finance, which today are the intellectual center of any production, can be located far from the production itself. In these conditions, countries are not able to localize such centers within their borders. Together with the loss of control over production processes on their own territory, they lose the ability to intelligently support future technological processes. The impendence of increasing the turnover of just such processes is quite real for Ukraine;

– excessive informal employment in promising fields and self-employment in technologically easy economic activities. The experience of world innovative development shows that the organization and prerequisites for the corresponding processes is the concentration of production capital and the diversification of R&D. It can be argued that, to a certain extent, the flexibility of informal employment is useful for mitigating short-term business cycles. At the same time, it cannot ensure sustainable technological development of the country. Self-employment, which is formed mainly in the form of micro-enterprises, objectively rolls towards archaic organizational and technological foundations, if they are not combined into a network of powerful industrial clusters. As a result, significant human capital is used for the production and distribution of low-productivity and non-progressive sectors of the economy.

To prevent the above impendences, it is necessary to carry out a number of measures in the following priority areas:

– a flexible and steady policy should be pursued to locate technologically complex and intellectually rich industries on the territory of Ukraine in order to preserve and further develop labor knowledge and skills in the high-tech sphere. Such a policy should be guided by the real, not declarative, formation of an innovative model for the development of the state's economy. In addition to increasing current income, such a policy can create powerful levers for large-scale and breakthrough development of the nation's intellectual human capital;
– it is essential to take measures simultaneously in two related areas in order to correct the imbalance between the professional and qualification structure of labor supply and demand for it: on the one hand, overcoming the crisis in coordinating labor skills and knowledge that are necessary in the workplace, as well as offering a system of education and vocational training; on the other hand, the restoration of a large-scale vocational and qualification orientation of the population with the help of more advanced methods of information and propaganda;

– ensuring the rights to the national and cultural identity of labor immigrants should be carried out without violating the corresponding rights of the titular nation. Without infringing on the universal human rights of an individual who lives and works in Ukraine, the state has the right to demand this in the forms desirable for its national development. The state should expand the field of regulation of the processes of settlement and labor activity of immigrants. This task cannot be solved separately from the national system of identification and movement of persons (both emigrants and immigrants) across the country's borders;

– mitigating the polarization of labor inequality through improving incentives for certain activities. In this regard, the state, using the methods of tax, antimonopoly and licensing policies, should contribute to an increase in professional mobility and constructive competition in local labor markets.

Conclusions

The postmodern era has made its own correctives to the quantity (decrease in active capital) and quality (change in value priorities, devaluation of the authority of leadership, etc.) of human capital. This requires a revision of the methods and essence of material, informational and other resource investment in the development of human capital.

Accordingly, the value of human capital directly depends the conditions of its establishment and development. Therefore, emphasis is placed on investment in human capital at the family level, given the role of one’s intellectual and psychophysiological abilities. It is these abilities that serve as the basis for development human capital.

It is also crucial to elaborate effective methods for quantitative assessment of human capital. They will allow one to objectively assess the total capital of the company in particular and the well-being of society in general.
To prevent risks that weaken national security, it is necessary to take a number of measures in the following priority areas: a flexible and unswerving policy should be pursued to locate technologically complex and intellectually rich industries on the territory of Ukraine; ensuring the rights to the national - cultural identity of labor immigrants should be carried out without violating the corresponding rights of the titular nation; mitigating the polarization of labor inequality through improving incentives for certain activities.

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References


