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## CAPITAL FORMATION FUNCTION OF SUBJECTS INVESTING IN HUMAN CAPITAL: THE FRAMEWORK OF ECONOMIC CHOICE

*The article grounds both rational and irrational elements and the factors of economic behavior of institutional investors in human capital reproduction. It is determined that the function of the capital formation of an individual, a family, a firm, and a state as human capital investors integrates their economic and social functions, thus providing positive synergetic effect from the investment in human development.*

*Keywords: human capital; human capital reproduction; institutional investors; rational and irrational economic behavior.*

*JEL classification: D10, D21, E62, J24, O15.*

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## КАПІТАЛОУТВОРЮЮЧА ФУНКЦІЯ СУБ'ЄКТІВ ІНВЕСТУВАННЯ У ЛЮДСЬКИЙ КАПІТАЛ: ЗАСАДИ ЕКОНОМІЧНОГО ВИБОРУ

*У статті обґрунтовано раціональні й ірраціональні складові та чинники економічної поведінки інституційних інвесторів у відтворення людського капіталу. Визначено, що капіталоутворююча функція індивіда, родини, фірми, держави як інвесторів у людський капітал інтегрує їх економічні і соціальні функції та забезпечує досягнення позитивного синергетичного ефекту інвестицій у людський розвиток.*

*Ключові слова: людський капітал; відтворення людського капіталу; інституційні інвестори; раціональна та ірраціональна економічна поведінка.*

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## КАПІТАЛООБРАЗУЮЩАЯ ФУНКЦИЯ СУБЪЕКТОВ ИНВЕСТИРОВАНИЯ В ЧЕЛОВЕЧЕСКИЙ КАПИТАЛ: ОСНОВЫ ЭКОНОМИЧЕСКОГО ВЫБОРА

*В статье обоснованы рациональные и иррациональные составляющие и факторы экономического поведения институциональных инвесторов в воспроизводство человеческого капитала. Определено, что капиталобразующая функция индивида, семьи, фирмы, государства интегрирует их экономические и социальные функции, обеспечивает достижение позитивного синергетического эффекта инвестиций в человеческое развитие.*

*Ключевые слова: человеческий капитал; воспроизводство человеческого капитала; институциональные инвесторы; рациональное и иррациональное экономическое поведение.*

**Problem setting.** Human capital reproduction directly depends on economic choice of institutional investors in human resources – the individual, the family, the firm, and the state. Taking this fact into consideration, explaining the contents and the key factors of economic behavior becomes important from the theoretical point of view as a crucial part of a scientific and experimental program of human capital development as well as within the economic framework of a state policy of assistance to human development.

**Recent research and publications analysis.** Nowadays the scientific and research programs of human capital are characterized by intensive development of conceptually determined theoretical aspects and methodological principles being substantia-

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ted by G.S. Becker (2003), T.V. Schultz (1961). Different aspects of human capital reproduction were researched by many national and foreign scientist: V. Andreiev (2009), V. Antoniuk (2007), A. Galchynskiy (2013), V. Smirnov et al. (2012), V. Vovk (2014).

The analysis of theoretical approaches of contents, types, factors and mechanisms of human capital reproduction has become an argument in making the conclusion on the importance of complex research of the capital formation function of institutional investors in human resources implementation as well as the factors and the mechanisms of its effective realization.

**The research objective** refers to the presentation of both rational and irrational elements and factors of economic choice of institutional investors in human capital as the framework of capital formation function.

**Key research findings.** Capital formation function directed to human capital creation, accumulation and realization is inherent to the individual, family, firm, and the state as institutional investors in human capital. Economic behaviors of the given subjects have significant differences determined by the peculiarities of their social and economic nature as well as by their aims of investing in human resources.

*Individual investors in human capital – a person and a family* – combine the functions of economic and the social agents according to their social roles. As economic subjects the individual and the family obtain an institutional form of a household, which acts at consumer, resource (labor, capital goods), financial and other markets at local, national and international levels. As a market subject, according to G.S. Becker (2003: 169), production and consumption functions are inherent to the household. Nowadays economic theory experts also determine saving and resource-delivering functions of households as one of directions of the resource-delivering function realization, which refers to the formation of work potential – a certain store of labor resources. The person and the family as social agents perform the functions of social system reproduction and social changes stimulation.

Thus, within the activity of the individual and the family economic and social natures are closely correlated: on the one hand, the performance of social functions of the determined investors is based on their economic potential as economic agents – a household that can be measured by an available store of economic goods, a flow of revenues, which enable its social functions realization. On the other hand, social certainty and directivity are inherent to economic functions of the household, which provide a material basis for the performance of individual and family social functions.

Investing their own revenues in human development, the individual and the family conduce to a process of human capital creation and accumulation, which are the contents of the capital formation function of the household and integrate its economic functions. The author emphasizes the following elements of the capital formation function of the household:

- *an economic element*: the realization of the capital formation function requests a certain direction of the household economic functions in provision of investments in human capital. To reach the objective set it is necessary to transform the consumption function, namely: a) change of time relishes through the reorientation of a consumption decision to future consumption on the account of current consumption restric-

tion; b) restructuring the consumption relishes in order to increase the share of human development needs; c) consumption priorities change in favor of educational services, healthcare, professional education etc. Secondly, the saving function of the household must be directed to maintenance and growth (for instance, on account of bank deposit interests) of the wealth in a monetary or material form as well as to resource accumulation aimed at human capital investing, which enables revenues increase in the future. Performing the capital formation function, a share of the household revenue as a source of current consumption and saving is directed to human capital investment, which indicates certain restrictions for both current consumption and the saving function realization. Thirdly, the household economic function realization related to labor potential formation (the resource-providing function) is based on family investing in human capital influencing the quality of trade resources;

- *a social element*: the household capital formation function refers to the creation of individual and family social capital. Investing in human capital, the household facilitates the inclusion of the individual and the family in social networks and acquiring a certain social status.

According to its sense and factors, the economic choice of the household as an individual investor in human capital recreation is, firstly, determined as a rational one based on the comparison of human investment benefits and disadvantages. Secondly, this choice expresses social, cultural, moral values and characteristics of the individual and the family, is driven by many non-economic factors, and may have irrational motives. Consequently, the aims and the criteria of household's economic behavior as a human capital individual investor go beyond the scope of economic imperialism. This assumes the consideration of its economic (rational) and irrational characteristics:

- *the rational choice* of the individual investor is explained by the model of Y. Ben-Porath (1967), according to which the individual chooses between the two ways of the usage of its human capital as a factor: a) production activity revenue obtainment; b) creation of additional units of own human capital. In terms of the second choice, revenues from production activity, which will be lost, are determined as expenses of individual investor, while future revenues increase are considered as benefits.

Household rational choice in favor of human capital investment is also performed within the system "current consumption – future consumption". If a household invests in human capital, the utility maximization will be attained by the inter-time equilibrium, taking into account not only savings, but also human capital investments performed on account of current consumption (utility loss) and savings (loss of bank deposit interest revenues). It follows that current consumption is determined as a general sum of household revenues minus interest savings and human capital investment (in the form of the increase of present value of future salary of family members). Household's rational choice in favor of human capital investment is determined by a marginal norm of the time relishes being the value of additional future consumption, which is large enough to compensate the refusal to consume a current unit of production in terms of constant household welfare;

- *irrational factors of households' economic choice*. Economic behavior of the individual is often determined by non-economic factors. G.S. Backer (1993: 37)

emphasizes that "a process of different non-economic variables accounting as well as the implementation of social, psychological, sociobiological, historical, anthropological, political, legislative and other methods of the scientific research implementation are required to explain human behavior". The need to consider the irrational factors of investors' economic behavior was suggested by J.M. Keynes (1978: 142) in his fundamental work "The general theory of employment, interest and money": "If the individual according to its nature hadn't had an aptitude to enjoy (except income) the possession of a factory, a railway, a mine or a farm, the individuals would get a small amount of investment resources each". In his opinion, such factors include: a) *conditionality* as public determination of investments as highly-effective and reliable forms of economic activity: investments, which are "assigned" from the public point of view and become "liquid" for certain individuals; b) *a state of self-confidence of the investor*, which is formed by public allocation; c) *trust* to counteragents: "We must also take into consideration the other side of the confidence state – the trust to those giving credits and being willing to borrow money that is sometimes determined as a credit state" (Keynes, 1978: 149).

J. Akerlof and R. Shiller (2011: 28) in a widely known book "Spirit of Animalis, as human psychology drives the economy and why it matters for global capitalism" accentuate that the irrational is an inevitable part of an everyday economic life, which can't be ignored. The authors consider trust, fairness, abuse and unfairness, money illusion, stories susceptibility as the main expression (categories) of the irrational in economic life.

Among the irrational factors trust is determined as a core factor of human capital investor behavior determination. A. Grytsenko (2012: 7) suggests that trust is considered as not only social and humanitarian phenomenon, but also as a core factor of economic development. Household's economic behavior is determined by level of trust between its members to the rationality of their own decisions (confidence, according to J.M. Keynes, 1978), activities and their forecasted results as well as between counteragents and public regulative institutes. Trust becomes the key element of individual and family social capital, and its level directly influences household's economic behavior as the human capital individual investor.

*Firm as the human capital investor* executes the functions of entrepreneurship as a basic economic resource of public development, which are the following: a) the economic one – production of goods and services, involvement and combination of resources, expenses reduction, investment and innovative activities; b) the social one as certain liabilities and activity directions of business in the social field. Firm's social function is considered as an internal (corporate solutions to social problems) or an external one (to ensure the state or regional social development). The firm social function is expressed in the form of corporate social responsibility, which is determined as free performance of certain activities directed at solving social problems, its participation in the social projects (national, regional, local) etc. Yet, the level, the efficiency and the properties (permanent or temporal; complex or differentiated; systematic or non-systematic) of both external and internal social functions of the firm become the main criteria of its social responsibility. Socially responsible business is determined as a socially-oriented one having balanced economic and social aims and functions; its functioning is characterized with positive social and economic effects.

Firm's economic and social functions are the ground for its capital formation function as the investor in staff human capital directed to provide an appropriate level of firm's specific human capital recreation being adequate to business requests.

*Rational choice* of a firm as an investor is based on the comparison of present and the future revenues and expenses related to human capital investment. The decision is taken on the basis of the following factors: 1) for short-term investments – a marginal recoupment rate of investments, measured as the annual net interest revenue from each additionally invested monetary unit; 2) for long-term investments – the net present value.

It should be emphasized that the implementation of the marginal recoupment rate and the net present value as the criteria of corporate investor's rational decision regarding the human capital investment has many restrictions, since many staff expenses and benefits from its development are intricately measured in monetary equivalents. The expenses of the firm as the investor in firm-specific human capital take the form of both direct monetary investments and the loss of benefits related to, for instance, the outplacement of an employee for a study period, the failure to fulfill the terms of labor agreement etc.

Firm's investment behavior is also determined by non-economic factors. Making decision on investing in human capital, an entrepreneur follows the criteria of trust, fairness etc., and makes the attempts to protect business from the threats of employees' opportunistic behavior. Institutionalization of firm – employee relations in this field becomes an important direction of the business protection, for instance, on the basis of the conclusion of certain contracts that determine rights and obligations of the parties regarding professional education, advanced training, other economic and social actions performed on the account of the firm.

Thus, capital formation function of the firm is grounded in the realization of its economic and social functions, is determined by rational and irrational factors and is directed on the accumulation and realization of firm-specific human capital.

*The state as the investor in human capital* is characterized by the capital formation function aimed at the creation of special conditions for human capital as a share of national welfare and the driving force of public development extended recreation. The state capital formation function realization is grounded in its economic functions aimed at the national economy stable development, competitiveness (internal, external, global) increase, and the realization of social functions. Economic behavior of the state as the human capital investor is characterized by the following properties:

- the state stimulates the processes of national human capital formation, accumulation and realization;
- human capital state investments are mostly social and institutional and are directed at the creation and development of both social and economic space and an institutional environment of the extended recreation of national human capital. These are the investments in: 1) social fields, which provide human development: science, education, healthcare, culture, social service and insurance, recreation activities etc.; 2) market and social infrastructure, the development of which facilitates the intensification of necessary connections between human capital owners and economic agents, the activity of which is directly related to production and usage of the last one; 3) the maintenance of the environment, since ecology factors directly affect

the human capital source – the individual; 4) the provision of law and order as a necessary condition for activities of individuals and the society;

- the state economic behavior, on the one hand, depends on economic decisions of households and firms as human capital investors and, on the other, stimulates its realization or restricts it;

- profitability of state investment in human development is determined as multilevel and multilateral one, since its results are possessed and used by not only the state, but also by individual and corporate investors as well as by human resource users – households and firms. On the one hand, cumulative effect is inherent to state investments in human capital: certain state benefits from investment in human capital are supplemented with benefits of both households and firms, which enjoy the results. On the other hand, state investment efficiency depends on the activities of individual and corporate investors, their ability to use the benefits of state investment in human resources;

- economic behavior of the state as the human capital investor includes different directions of its economic (money and credit, financial, industrial, innovative, structural, entrepreneurship development, regional etc.) and social policy. That is to say, state capital formation function obtains the form of state social and economic policy directed to provide extended reproduction of national human capital;

- the state investment choice depends on many factors: technical and technological, economic, political, cultural, international ones. Its appropriateness is determined by the criteria of expenses and revenues as well as by national interests and priorities. Such irrational factors, as the trust to the state and the fairness of decisions also play a significant role in state capital formation function realization.

**Conclusions.** Institutional investors in the process of human capital reproduction perform the capital formation function, which integrates economic and social functions of the individual, the family, the firm, and, the state and performs the achievement of the positive synergetic effect of investing in a human. The choice of investors is influenced by economic (rational) and irrational factors, which in the integrity determine their investment behavior. According to the above, national human capital reproduction depends on the level of capital formation function of households, firms and the state realization that requests development and implementation of systematic steps within the state social and economic policy directed on the creation of required conditions for their effective activity regarding the investment into human development.

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