DOI: 10.22616/j.balticsurveying.2024.19.008

METHODOLOGICAL BASIS OF THE DEVELOPMENT OF THE INSTITUTIONAL ENVIRONMENT OF THE LAND MANAGEMENT SYSTEM

Tretiak Anton¹, Hunko Liudmyla², Hetmanchyk Ivanna², Zamlynskyi Serhii ²

¹Bila Tserkva National Agrarian University ²National University of Life and Environmental Sciences of Ukraine

Abstract. It is substantiated that the institutional concepts of the latest institutional and behavioral economic theory should be placed in the methodological basis of the development of the institutional environment of the land management system. Institutions and institutes are the key to understanding the relationships between all subjects of the economic system of land management, and institutional changes determine the direction of its development and are a defining trend today.

The institutional system in the field of land relations, land use and land management is a set of organically interconnected institutions and institutes that are a certain logically complete, integral unity, capable of self-development and self-reproduction, as well as organizations and individuals that act within given institutional restrictions regarding land relations and organization of land use.

Firstly, the methodology of institutionalization of land management considers socio-economic systems through holistic development. The principle of the integrity of the socio-economic system research includes an interdisciplinary approach. Secondly, individuals receive characteristics through the prism of the existence of institutions and institutes that condition their behavior and interaction. Thirdly, institutional changes require not only quantitative, but also qualitative methods of observation, which analyze not the results of changes (for example, indicators of efficiency and growth), but the direction, strategy and the very process of evolution with the clarification of the causes, all stages and forms of transformations.

Key words: land surveying, economics of land planning, land relations, land use.

Introduction

Economy is a complex adaptive social and behavioral system. The complexity of the system is determined by the presence of many independent elements, each of which can interact with the other. In the process of interaction of elements, they jointly form a certain environment (Arthur, 1994). In the conditions of the institutional transformation of the economy in the system of socio-economic sciences, the search for a new paradigm of economic theory as a set of ideas and concepts, a theoretical and methodological basis, which sets the vector of economic development, does not stop. One such attempt is the emergence of behavioral economics as a science based on a positivist approach to the study of economic processes and phenomena, which provides a psychological explanation for the accumulation of empirical material.

Institutional structure as a complex of economic institutions-norms and institutions-organizations is an orderly arrangement of institutional elements that play an important role in the economic activity of society, that have characteristic relationships inherent only to them and collectively form a certain system of an institutional nature. The orderliness of the location of the elements implies their exact and clear location relative to each other on the scale of the entire system, the selection of levels of their hierarchy and the identification of the corresponding hierarchical relationships. The concept of "economic institutions and institutes" was introduced into scientific circulation by the institutional-sociological direction of economic theory. Representatives of institutionalism are interested in two main problems: economic power and control over the economy, which is why they use the concept of "institutional theory". Given that in the process of land reform, land management as a socio-economic institution (Третяк et.al, 2021) did not develop, and the state removed itself from its implementation (Третяк, 2013), accordingly, for the development of the economy of land management there was a need to develop methodological principles.

Institutions slowly adapt to changes in the surrounding environment, so institutions that were effective in the past become ineffective and remain so for a long time, since it is difficult to return society from the historical path established a long time ago. There is a difference between institutions and institute-organizations. While institutions are a set of rules and laws that determine the interaction and action of individuals, institutes-organizations are corporate actors that can themselves be the objects of institutional restrictions. Institutions have an internal structure, an institutional framework that determines the behavior of individuals who form organizations. New institutionalism ("new

institutionalism") was initiated in the works of B. Moore "Social origins of dictatorship and democracy" (Moore, 1966), S. Huntington "Political order in changing societies" (Huntington, 1991), T. Skocpol "States and social revolutions: a comparative analysis France, Russia and China" and R. Coase "The Nature of the Firm" (Coase, 2007). Starting with T. Veblen (Veblen, 1984), one of the defining elements of institutionalism became an evolutionary approach to economic analysis. J. Hodgson (Hodgson, 2000) singles out 5 methodological provisions of institutionalism, formulated by U. Hamilton (Hamilton, 1932) in 1919: the evolutionary nature of the economy; practical orientation of the theory without reducing it to economic policy recommendations; the main task of economists and land managers, as well as other specialists, is the study of institutes and institutions; interdisciplinary approach; rejection of the theory "man is a utility maximizer" as an unrealistic and erroneous concept. At the same time, the new institutional economic theory (NIET) most often analyzes institutions and institutions as the consequences of the decisions of rational, maximizing agents, so it can be said about the mutual influence of individuals and institutions and institutions on each other. A. Tkach defines the basic elements of the NIET research paradigm as a triad: property rights; transaction costs; theory of contracts (Tkau et.al, 2007).

Methodology of research and materials

The methodology of studying the processes of development of the institutional environment of the land management system includes the study of the regularity of the functioning of the economy of land relations, land use and land management. For this purpose, it is substantiated that institutional changes determine the direction of development of the land management system. The methodological basis is the methods of experimental research, owe to which it is possible to more clearly monitor the conditions of the land use regime and the environment in such a way that, as a result, it will be possible to assess the influence of each of these factors separately.

Discussions and results

In this study, we divide economic institutions and institutes into institutions-norms and institutes-organizations (Tpetric et.al, 2021). Economic institutions are understood as the rules of the game in society or formally created restrictions by people that shape the interaction of people. Institutions create a structure of exchange incentives in social, political or economic activity. They are both formal laws (constitution, legislation, property rights, etc.) and informal rules (traditions, customs, codes of conduct). Institutions are created by people in order to ensure a certain order and eliminate uncertainty in relations, including the field of land relations, organization of land use and protection, and land management. Such institutions, together with standard constraints accepted in economics, define a set of alternatives and thus determine rational and sustainable land use. Institutions are a set of rules that structure land relations, the organization of land use and protection and land management in a special way, knowledge that all members of society must possess. Formal institutions are often created to serve the interests of those who control institutional change in a market economy. The pursuit of one's own interests can have a negative effect on others. Public institutions that fulfill ideological and spiritual needs influence social organizations and economic behavior.

Institutions in the field of land relations, organization of land use and protection, and land management can be considered as a component of land capital that can change due to depreciation and new innovations and investments. Formal laws can change quickly, but enforcement and informal rules change slowly. Ukraine, which adapts the relevant economic institutions of foreign countries to the market model of the land market, can serve as an example here. Informal rules, norms, customs are not created by the authorities, they usually develop spontaneously.

At the same time, the dominant systems, and the existing systems in Ukraine of land relations, land use and land management, are not always economically efficient, modern realities require the use of not only economic, but also social and ecological criteria of behavior. The behavior of a person as an individual always has a social character, which is manifested in the close inseparable connection between individual actions and society as a whole. According to the researches of O.M. Nikoliuk (Ημκοποκ, 2013), the main properties of an individual from the point of view of institutional theory are: 1) the relationship of his behavior with the process of evolution of economic systems; 2) social nature of actions; 3) partial rationality of behavior.

Based on the above, a person as an individual of land ownership, within the limits of institutionalism, is a partially rational individual, whose social actions are at the basis of the evolution of economic systems and elements of their external environment. At the same time, the influence on the evolution of the economic system related to land relations and the organization of the use of land and other natural resources can be indirect. In particular, her behavior within social, legal, environmental, etc. systems of relations indirectly affects the economic systems of land relations. This is confirmed by the ideas of the new behavioral economy, the laureate of the 2017 Nobel Prize in Economics, Richard Thaler, which reflect the leading trend in economic science - interpenetration and its relationship with other sciences. According to Richard Thaler, traditional economic theory is outdated: "rational man" is too limited a model to explain people's decisions and actions. "Irrationality did not arise by chance and does not make sense - on the contrary, it is completely systematic and predictable" (Thaler, Benartzi, 2004): "a person does not make a choice impartially. His new behavioral economics aims to rethink human behavior, especially in the area of land ownership.

Given that a person as an individual is a central figure in institutional economic theory, it has a significant influence on the adoption of certain decisions, and institutional theory in economic analysis will not be complete if it is not supplemented with behavioral economic theory. In fig. 1 shows a logical-semantic diagram of the tree of the latest institutional and behavioral economics proposed by us (Третяк et.al, 2021).

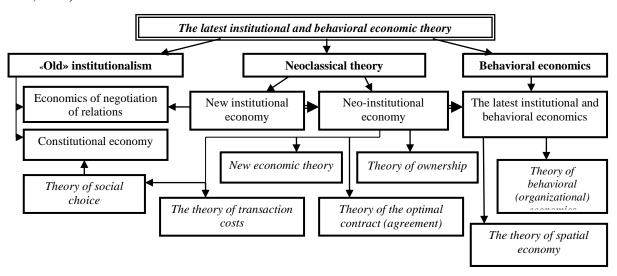


Fig. 1. Logical-semantic scheme of the tree of the latest institutional and behavioral economics (Третяк et.al, 2021)

The main directions of behavioral economic theory research are currently the following (Coursey et.al, 1984): the theory of prospects (the theory of the rational choice of an individual in conditions of risk and uncertainty, the theory of unexpected utility, identified typical deviations, stereotypes in the behavior of an individual, the so-called cognitive heuristics); game theory and bargaining theory (behavioral theories of games, concepts of "fair equilibrium", "ultimatum games" and "dictator games"); theory of auctions, experimental testing of various pricing strategies and finding out the degree of confirmation of the consequences of traditional models on real data. The new behavioral economics now puts Homo sapiens next to Homo economicus, thereby allowing this "contradiction" of A. Smith. This news in R. Thaler's behavioral economics can be represented by the following scheme (Table 1).

Table 1 Characteristic differences in human behavior in R. Thaler's new behavioral economy

Homo economicus	Homo sapiens
Free, independent	Limited independence
Selfish	Altruist
Rational	Relative rationality
Knowledgeable	Incomplete information

This is the sociological approach to a person involved in economic activity in the field of land relations, land use and land management.

The institutional environment of the economy of land management and land management determines the nature of relations and connections between economic entities, that is, the framework for the formation of institutional actions regarding the implementation of land management measures. The institutional structure implies a certain hierarchy of various institutions and institutes, which regulates human relations. The formation of the institutional hierarchy depends both on the types of institutions and institutes, as well as on the level of coverage of their action and duration of functioning (Holling, 2001).

The result is a complex mix of formal and informal constraints. These limitations are embedded in the language of ownership of land and other natural resources as material things and beliefs. Together, they determine the forms of ownership and organization of land use and interaction between people. For example, land is universally valued for its inherent and incredible importance in terms of religion, spirituality, aesthetics, and opportunities for life and recreation.

In the economic sphere of land management, these are first of all models (options of adoption) of land management socio-economic and ecological measures and actions for the formation of balanced land use (Мединська, 2022). The imposition of restrictions using the structure of the institutional hierarchy allows you to organize the choice of options and determine the rules of the game.

The institutional system in the field of land relations, land use and land management is a set of organically interconnected institutions and institutions that are a certain logically complete, integral unity, capable of self-development and self-reproduction, as well as organizations and individuals that act within given institutional restrictions regarding land relations and organization of land use. There is a certain hierarchy and subordination between institutions and institutes included in the system. Institutions and institutes are realized in changing the behavior of individuals, and therefore, the economy of land management should be considered as an institutional system taking into account the individuals themselves (Fig. 2) (Третяк, Гунько, 2022).

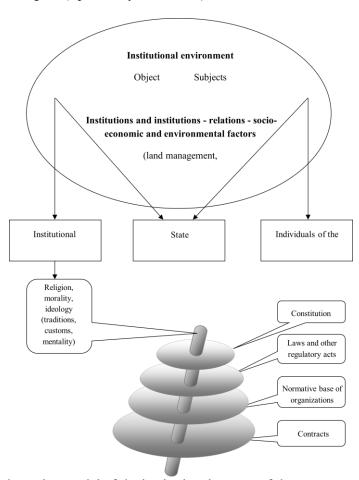


Fig. 2. Logical and substantive model of the institutional system of the economy of land management

Property rights to land and other natural resources and enforcement of contracts (agreements) are two of the most important elements of the institutional structure. Creating a system of guaranteeing ownership rights to land and other natural resources (land system, State Land Cadastre and state registration of property rights) and ensuring their compliance with respect to landowners and other private individuals, the government and the institutional structure provide incentives for innovation and investment in tangible and intangible land assets and risk perception. By ensuring the effective coordination of the interests of all participants in land relations in the process of land management, the institutional structure stimulates market transactions with objects of land management.

The analysis of institutions and institutional systems is based on the following general methodological principles of comparative institutional research: a holistic approach, that is, the focus of the analysis is on the consideration of the system as a whole, and not on the behavior of individuals; development of a universal and system-neutral language for describing the studied systems; definition of the system studied through the institutional structure (the institutional approach involves the construction of the basic structure of institutions and institutes or institutional forms); forming a typology of such systems on this basis (comparatively, a typological method of analysis); interpretive methodology which finds its expression in the discovery of latent generalized structures and then understanding of specific social systems as their individual cases.

Conclusions and proposals

The realization that institutions and institutes are the key to understanding the relationships between all subjects of the economic system of land management, and institutional changes determine the direction of its development, is a defining trend today. Firstly, institutionalization of land management considers socio-economic systems through holistic development. The principle of the integrity of the socio-economic system research includes an interdisciplinary approach. Secondly, individuals receive characteristics through the prism of the existence of institutions and institutes that condition their behavior and interaction. Thirdly, institutional changes require not only quantitative, but also qualitative methods of observation which analyze not the results of changes (for example, indicators of efficiency and growth), but the direction, strategy and the very process of evolution with the clarification of the causes, all stages and forms of transformations.

References

- 1. Arthur W. (1994) Inductive Reasoning and Bounded Rationality, American Economic Review, Vol."-, 84, № 2, pp. 406-411.
- 2. Coase R. (2007) Firma, rynok i pravo (Firm, market and law), Delo LTD, Moskow, Russia. 224 p. (in Russian)
- 3. Coursey D.L., Smith V.L. Experimental (1984) Tests of an Allocation Mechanism for Public, Private or Externality Goods. Scandinavian Journal of Economics, Volume 86, pp. 468–484.
- 4. Hamilton W. (1932) Institution. Encyclopedia of the Social Sciences, Volume 8, pp. 84-89.
- 5. Hodgson J. (2000) What is the essence of institutional economic theory? Trans. with English. Journal of Economic Issues, Volume 34, Issue 2. pp. 317–330.
- 6. Holling C. (2001) Understanding the Complexity of Economic, Ecological, and Social Systems. Ecosystems, Volume 4, Issue 5, pp. 390–405.
- 7. Huntington S. (1991) The Third Wave: Democratization in the Late Twentieth Century. University of Oklahoma Press, Oklahoma, USA. 77 p.
- 8. Moore B. (1966) Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World. MA: Beacon Press., Boston, USA. 204 p.
- 9. Thaler R., Benartzi S. (2004) Save More Tomorrow: Using Behavioral Economics to Increase Employee Savings, Journal of Political Economy, Volume 112, pp. 164-187.
- 10. Veblen T. (1984) Teoryia prazdnoho klassa (Theory of the idle class), Prohress, Moskow, Russia. (in Russian)
- 11. Мединська Н. "Економічний механізм природокористування в умовах сучасних викликів: принципи та інституціоналізація [The economic mechanism of nature management in the conditions of modern challenges: principles and institutionalization]". Економіка та суспільство. 2022, Vol. 38, pp. (in Ukrainian)
- 12. Николюк О. М. "Інституціональна економіка: ключові положення та основні поняття [Institutional Economics: Key Concepts and Basic Concepts]". Сталий розвиток економіки, 2013, Vol. 5. pp. 43-50 (in Ukrainian)
- 13. Ткач А., Ільїн В., Ткач Т., Баль-Вожняк Т., Вожняк М., Задоя А., Івашина О., Кузьмінов С., Петруня Ю. (2007) Інстиціунальна падигма транспортного розвитку (Institutional paradigm of civilizational development), КПУ, Запоріжжя, 276 с. (in Ukrainian)

- 14. Третяк А. (2013) Землеустрій в Україні: теорія, методологія: монографія (Land organization in Ukraine: theory, methodology: monograph). ОЛДІ-ПЛЮС, Херсон. 488 с. (in Ukrainian)
- 15. Третяк А., Третяк В., Прядка Т., Капінос Н. "Наукова гіпотеза трактування землевпорядкування як соціально-економічної інституції [Scientific hypothesis of the interpretation of land planning as a socio-economic institution]". Економіка та держава, 2021, Vol. 5, pp. 8-14 (in Ukrainian)
- 16. Третяк А.М., Гунько Л.А. "Методологічні засади розвитку економіки землевпорядкування на засадах інституціональноповедінкової теорії [Methodological foundations of the development of the economics of land management on the basis of the institutional-behavioral theory]". Економіка та держава. 2022, Vol.7, pp. 32-39 (in Ukrainian)
- 17. Третяк А.М., Третяк В.М., Ковалишин О.Ф., Третяк Н.А. (2021) Економіка земельного ринку: базові засади теорії, методології, практики: монографія (Land market economics: basic principles of theory, methodology, practice). СПОЛОМ, Львів. 488 с. (in Ukrainian)

Information about authors:

Anton Tretiak, Dr.Hab. in Economics, Professor, Chief Researcher, Bila Tserkva National Agrarian University. Address: Cathedral Square, 8/1, Bila Tserkva, Kyiv region, 09117, Ukraine; phone: +380987491163; e-mail: tretyak2@ukr.net; Fields of interest: land management, land governance, spatial planning, land market regulation. Liudmyla Hunko, Ph.D., Assoc. Prof., Associate Professor of the Land-Use Planning Department, National University of Life and Environmental Sciences of Ukraine. Address: Vasylkivska str., 17, Kyiv, 03040, Ukraine; phone: +380503821744; e-mail: gunko_l@nubip.edu.ua; Fields of interest: land management, land administration, spatial planning, property taxes.

Ivanna Hetmanchyk, Ph.D, Deputy Director of the Detachable Subdivision "Boyarka Professional College of National University of Life and Environmental Sciences of Ukraine". Address: St. Agricultural technical school 30, Boyarka, Kyiv Region, 08152, Ukraine; phone: +380963667458; e-mail: 170975ivanna@ukr.net; Fields of interest: land management, land valuation, land protection.

Serhii Zamlynskyi, Master of Science, Ph.D.-student, Department of the Land-Use Planning, National University of Life and Environmental Sciences of Ukraine. Address: Vasylkivska str., 17, Kyiv, 03040, Ukraine; phone: +380632524825; e-mail: sergeysz75@gmail.com; Fields of interest: land management, land administration, spatial planning.