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THE HOMO ECONOMICUS MODEL: SYSTEM-WIDE PARAMETERS

Abstract. *The article is devoted to the system-wide settings in the application to the model of homo economicus. The author concludes that the systematic analysis of the homo economicus model gives the ability to define the linked list of parameters of the studied object. Homo economicus is represented in the article as a system, with its properties defined (attribute parameters), fixed characteristics considered under the context of the systemic manifestations of the studied cultural type. System analysis enables to integrate different approaches to the study of the subject, to relate the various scientific version of solving the problem, which brings together the most important spheres of human existence. The author concludes that this system is ordered, substrate-open (incomplete), structurally-open (incomplete), substrate-non-minimal, structurally non-minimal, stable, non-unique (by the substrate), permanent, non-elementary, conceptually non-point, structurally non-point, variable in structure, non-homoeomeric, non-immanent, uncentered, external, flexible, non-totalitarian, segmented, not entirely trustworthy, nondeterministic, primary at the time of its creation, secondary (as a subject of social philosophy), partial, strong in relation to the substrate, non-cyclic, partially auto-regenerative by the substrate, partially externally-regenerative by the substrate, non-tven.*

Key words: *homoeconomicus, system analysis, system-wide parameters, attributive parameters, model*

МОДЕЛЬ ЭКОНОМИЧЕСКОГО ЧЕЛОВЕКА: СИСТЕМНЫЕ ШАГИ ПАРАМЕТРЫ

Аннотация. Статья посвящена рассмотрению общесистемных параметров в применении к модели экономического человека. Автор приходит к выводу о том, что именно системный анализ модели экономического человека представляет возможность обозначить связный список параметров исследуемого объекта. В статье экономический человек представлен как система, определены ее свойства (атрибутивные параметры), устойчивые характеристики рассмотрены в контексте системных проявлений изучаемого культурного типа. Системный анализ позволяет интегрировать различные подходы к исследованию предмета, соотнести разнообразные научные версии решения проблемы, которая объединяет важнейшие сферы человеческого существования. Автор делает вывод о том, что это система упорядоченная, субстратно-открытая (незавершенная), структурно-открытая (незавершенная), субстратно-неминимальная, структурно-неминимальная, стабильная, неуникальная (по субстрату), стационарная, неэлементарная, концептуально-неточечная, структурно-неточечная, вариативная по структуре, негомеомерная, неимманентная, нецентрированная, внешняя, нежесткая, нетоталитарная, расчлененная, невсецелонадежная, недетерминирующая, первичная в момент ее создания, вторичная (как предмет социальной философии), частичная, сильная относительно субстрата, нециклическая, частично авто-регенеративная по субстрату, частично внешне-регенеративная по субстрату, не-твеновая.

Ключевые слова: экономический человек, системный анализ, общесистемные параметры, атрибутивные параметры, модель

МОДЕЛЬ ЕКОНОМІЧНОГО ЛЮДИНИ: СИСТЕМНІ КРОКИ ПАРАМЕТРИ

Анотація. Стаття присвячена розгляду загальносистемних параметрів в застосуванні до моделі економічної людини. Автор приходять до висновку про те, що саме системний аналіз моделі економічної людини дає можливість позначити зв'язний список параметрів досліджуваного об'єкта. У статті економічна людина представлена як система, визначені її властивості (атрибутивні параметри), стійкі характеристики розглянуті в контексті системних проявів цього культурного типу. Системний аналіз дозволяє інтегрувати різні підходи до дослідження предмета, співвіднести різноманітні наукові версії вирішення проблеми, яка об'єднує найважливіші сфери людського існування. Автор робить висновок про те, що це система впорядкована, субстратно-відкрита (незавершена), структурно-відкрита (незавершена), субстратно-немінимальна, структурно-немінимальна, стабільна, неунікальна (за субстратом), стаціонарна, неелементарна, концептуально-неточечна, структурно-неточечна, варіативна за структурою, негомеомірна, неіманентна, нецентрована, зовнішня, нежорстка, нетоталітарна, розчленована, невсецілонадійна, первинна в момент її створення, вторинна (як предмет соціальної філософії), часткова, сильна щодо субстрату, нециклічна, частково авто-регенеративна за субстратом, частково зовнішньо-регенеративна за субстратом, не-твенова.

Ключові слова: економічна людина, системний аналіз, загальносистемні параметри, атрибутивні параметри, модель

Introduction. Under the context of the modern global economic system formation, philosophical problematization of economic knowledge, including the search for new forms and methods of its research and presentation not only in scientific discourse but also in socially meaningful contexts is particularly relevant. The economy today is not an isolated field of knowledge and

specific scientific search. In spite of strict accuracy and conceptual apparatus formalization, philosophy and sociality cannot be expelled from it, and "human" will turn into utmost abstraction. He, for the sake of whom economic and social changes in society are committed, is at the area of interest of philosophy of economy, sociology, social economy and especially social philosophy. The primary task of the socially-oriented economic disciplines is a study of economic bonds dynamics, economic stratification, mechanisms of population social protection; the influence of market relations on social system and life of society on the whole. The philosophical research is directed to the study of content and filling with new meaning basic concepts of socio-economic knowledge, to analysis of socially significant and complex to study phenomena, among which in the first place, we can highlight the *Homo Economicus*.

Material and Methods. System modeling makes it possible to get a complete idea on such a complex subject as *Homo Economicus*, as a systematic approach algorithm allows obtaining objective knowledge on what already exists, on the dynamics of change, that is, to combine the ongoing search with a generalization of the accumulated material. *Homo Economicus* is represented by the key aspects of the system model (conceptual, structural, substrate descriptors). Economically beneficial activity motivation becomes a systemically important characteristic.

Results. Let us consider the characteristics of the system-wide settings in the application to the model of *Homo Economicus*. The system lies in the particular environment, thus is exposed to the changes. Under the context of parametric theory, the environment is understood as the relations between objects: "The environment is opposed to the system not as something different from the system but as another system. The opposite concept to the "system" is the "non-system"... "Non-system" is a contradictory opposition to the "system." The term "chaos" is used to denominate the opposite contrary [5, p. 22]. The system as a set of human behavior models satisfying a cost-effective motivation of its activities (see above the dual definition), functionally linked to the environment as a system in which this activity is possible and is carried out. The system-environment interaction is characterized by goal orientation. At the same time particular system (for example, the choice of goal-setting methods, funds finding, cost-effective decision-making algorithm), isolated from the others, it cannot ensure the implementation of the economically beneficial activity, which is the goal of economic and social communication in its broadest sense. This requires the interaction of multiple systems with their environment.

Environment types (with which the system interacts) can be represented in the social and cultural historical "vertical" and the context economic "horizontal." Thus, the concept of the environment in relation to the subject of study is considered taking into account the differences between the system of society and the system of economic practices; that is within the paradigm and syntagm. Both economic theory and empirical reality of the economic fact, which "reveal" a particular conception of man, the extent of its freedom in the existential choice, the possibility "to have" and "to own" can be perceived as the environment.

According to the vertical angle, the historical forms of economic activity can be the environment for *Homo Economicus*. Interaction with the environment suggests the possibility of system resources realization. According to various indicators of multidimensional interaction the system of "Homo Economicus" may be associated with a variety of environments, forming the vast expanse of the system resources implementation in the economy. The environment, as a rule, is changeable and variable, as it implies close and peripheral interconnections. How the system reacts to change can be judged by the parameter of entire trustworthiness.

Entirely trustworthy systems are the ones that "keep their system-forming property at the elimination of any number of the elements, except one. Political dictatorship is not entirely trustworthy, it usually disintegrates with the removal of one of the elements – the dictator" [8, p. 61]. The system of the "Homo Economicus" is non-homoeomerous on the substrate (as well as the economic system), so it is not entirely trustworthy: it can be destroyed by the destruction of a certain number of elements.

In the general parametric theory of systems some parameters that are possible only if the system has other parameters are used [2, p. 72]. For example, homogeneity/ inhomogeneity, homoeomeria/ non-

homoeomeria, self-similarity/ non-selfsimilarity, simplicity/ non-simplicity, multilayeredness/ single-layeredness.

According to the structural and substrate descriptors, system can be fixed as a homogeneous one: "If the system consists of homogeneous elements (thereafter, structures) – in the same sense as the concept defined – then the given system is consistent (homogeneous) by the substrate or structure" [1, p. 66]. Structure and substrate of the system can be inhomogeneous (heterogeneous). The homogeneity/heterogeneity correlates with the compartmentalization parameter. The system "Homo Economicus" is undivided (consisting of more than two elements) and inhomogeneous (Homo Economicus can be considered from material and spiritual needs). Operation heterogeneity is restricted by the weakening of the structural system integrity.

From the perspective of parametric general system theory, Homo Economicus is a substrate-open and structurally open system (unfinished). This means that the new elements can be added to it, unlike to completed or to substrate (and structurally) – closed systems which do not allow any connection as it threatens them with destruction. For example, we cannot add a new word into a sonnet by William Shakespeare, cannot change the number of lines, verses, arranged in a specific order (structure).

Incomplete systems have the parameter of force. It may as well be attributed to the system considered.

By the minimality parameter, the system is considered from the point of view of removing the element with its inevitable destruction. In the substrate-nonminimal and structurally-non-minimal systems, to which we refer the Homo Economicus, with the removal (ability to lose) of a single element the system does not suffer. The stationary parameter depends on the reaction of the replacement of one element by another. If the system cannot be restored, preserved under the elements permutation, then it is non-stationary. Incomplete (see above) system "homo economicus" refers to the systems stable by the stationary parameter. Homo economicus is perceived as renewing stable elements dynamic configuration by a substrate. Understanding of the usefulness of activities based on the economic benefits can vary from the orientation to private, corporate, public, party and other interests that may change throughout life. Work can be changed, the way to earnings, but overall life concept of homo economicus stays a system-forming priority, which proves the stability of the system, regardless of the isolated substrate variations and substitutions.

Stability parameter is associated with the rearrangement of the structural elements affecting the stability of the system. In general, scientists attribute different features to stability, "stability, stationarity, ability to self-preservation, reliability, ability to self-healing, nature to change all things that become part of the system, etc." [4, p.63]. Can the structure of the "homo economicus" system be changed? It certainly can. It is a dynamic combination of components; it can be said that the system is aimed at stability.

The question of the order in the system has a history associated with the understanding of the order in general. The ordering parameter in the system approach suggests a way of substrate organizing. Therefore, it refers to the structure. Market relations entered into by the homo economicus, for example, can be considered from the perspective of autonomy from the state, and regarding private and public interests consistency. The degree of organization of interaction will reflect the structural ordering. The homo economicus himself is in a certain sense a product of market relations in which he finds benefit for himself. Therefore, he is "settling," organizing, regulating according to the suggested circumstances. There are disordered systems as well, for which the arrangement of the elements does not matter, for example, summative systems (a bunch of apples, a bag of sunflower seeds).

From the point of view of the cause-effect conditioning inside descriptors and between them the systems can be considered according to the parameter of centeredness/ uncenteredness. In a centered system "there is a particular element by which the system-creating relations of any other elements are implemented. The uncentered system does not have such "special" elements. Centered systems are relatively rare. Mostly one has to deal with different cases of "partial" centeredness" [8, p.62-63] that the centered system is structurally almost coherent to the most. It is possible to speak of the centeredness/

uncenteredness parameter in respect of homo economicus regarding the structural integrity of the system, which is destructively influenced by "polycentrism." The role of existence conditions decentralization of the studied system is the actual topic of a separate study.

Determinacy parameter is connected with implicative system organization, cause-effect conditionality of descriptor elements that may determine (deterministic system)/ not define (non-deterministic system) the presence of each other in the structure. For example, with the preserved fragments it is possible to restore the other elements of the text, even, perhaps, the text as a whole, and with the preserved texts it is possible to restore the Grammar of the forgotten language. Homo economicus belongs to non-deterministic systems. On the inner description interaction level, it is hard to identify an element which would predetermine the presence of other elements. It is also hard to do this because it is a developing system.

According to the regenerative parameter systems can be considered as fully autoregenerative by the substrate, partially autoregenerative by the substrate; completely externally autoregenerative by the substrate, partially externally autoregenerative by the substrate. This refers to the ability to repair itself, to the external recovery, lack of ability to recover the substrate and the system structure. Since the homo economicus as the system allows the replacement of its elements, it is possible to fix regeneracy by the substrate as a kind of non-uniqueness, and regeneracy by the structure as a sort of stability (stability orientation) of the given system.

The integrity, which is characteristic of the degree (intensity) of the inner descriptory (in the concept, structure and substrate) and between descriptory connectivity also belongs to the descriptory internal relations properties of the "homo economicus" system. As an attribute, linear system-wide parameter integrity can vary from the minimal to maximal points. This means that there are no completely "incomplete" systems. Thus, similar to the way it was with the concepts of model and system in the extensional meaning "integrity" and "systems" are the same, but they do not coincide intensionally [8, p.242].

Inner descriptory connections of the "homo economicus" system model can be characterized by various degrees of intensity. Substrate (elements), which we consider as a set of behavior models may vary depending on the responses to changes in the environment, under the influence of conjunctural economic and other factors, and their combinations. In addition, the body of behavior models that can be included for analysis in the substrate is non-rigid itself (rather integral).

The structure as a connection, the relationship between the elements has its own particular integrity; it is the structure that preserves a combination of elements as a whole (concept), integrating all the descriptors in the system "homo economicus."

The problem of integrity is topical both in philosophy (logic-methodological, epistemological, formal-logical direction), and in other areas of science such as natural science, technical science, humanities (biosystems, society, government, man-made objects, personality, and much more).

Scientists analyze such types of integrity as conceptual and structural, structural and conceptual, structural and substrate, substrate-structural, conceptual and substrate and substrate-conceptual. It is emphasized that the mixing of different classes of integrities, as well as the substitution of "integrity" with other system characteristics, leads only to confusion. Comparison of different classes integrities is inconsistent, although the correlation between various kinds of integrity apparently exists. One cannot compare the structural integrity of one system with the substrate integrity of the other, say that the integrity of one system is more (or less) than the integrity of the other, the rule of the common grounds should be preserved. Integrity, as such, is distinguishable from the level of each of a number of other system parameters, for example, indivisibility, completeness, fullness, uniqueness, orderliness, determinacy "[8, p.241].

In the parametric general systems theory integrity is considered in correlation with the concept of simplicity-complexity. Homo economicus is an open complex system, which varies according to various

parameters, integrity and complexity as well.

There is a high degree of integrity, correlating with a decrease in complexity, as well as a complex system with low integrity. The individualistic, egoistic interests orientation of the homo economicus, motivated primarily by the benefit means disobeying the general (integral) strict collectivist scheme of participation in economic activities, the search for their own ways of business development. Thus, in the community, thanks to the individual efforts of the homo economicus in the variety of his creative expressions, the economic system is constructed as a combination of all the systems. Thus, increases the complexity parameter, which in turn makes it possible to create a plurality of individual systems. This is an economically promising, developing a positive dynamics society, and the efforts of the homo economicus contribute to this process.

Regarding tasks of the given research, the cases of anomie were not considered. Although of course, it is a very topical direction for the study of the system-environment interactions. Anomie is the destruction of ideals, norms, values, under the impossibility or the strict restriction of needs satisfaction in a legal way, the absence of statutory and regulatory consistency between the objectives and means of achieving them, especially in crisis periods of society development.

Life is always more complicated than the defined schemes. Descriptors variability allows to consider any combination of integrity and complexity parameters and their dynamics, for example, a high degree of integrity with a low degree of complexity; increasing integrity and its impact on the change (full, partial, and the lack of visible changes like stagnation) complexity; increase/ decrease of the integrity and increase/ decrease of the complexity. We can consider the connectivity as a unique feature of relations and as a particular relationship between the features. When the characteristics of the parts do not have the features of the whole, we deal with the study of integrative system properties [7]. If we accept the concept that the degree of integrity is determined by the degree of connectivity, then the study aims to examine the causes of integrity and the study of integrative properties is the study of its consequences [3, p.31].

Degrees of integrity are given the particular attention within the framework of the parametric theory [9]. The study is based on the idea of a dual system modeling. Any object, as it has already been mentioned above, can be represented as a system in a dual manner. Let us remember that if any relation with a primarily fixed feature was realized on the object than it is a relational structure with the attributive concept. If features that were in a pre-fixed relationship will be singled out, then we are dealing with an attributive structure and relational theory. Scientists consider connected lists of parameters as a means of studying the system integrity with respect to a particular descriptor, integrity and integrative properties of the systems, and others. [3, p.13-18].

Integrity and complexity parameters relativization is used to systemic descriptors. It is always clarified what kind of descriptor is mentioned: concept, structure or substrate. Scientists denote particular dependence in the correlation of different parameters, noting the impact of attribute system parameters on the structural and substrate integrity of the attributive concept systems. For this, the systems, having different indicators of binary attribute system parameters are compared by structural-substrate integrity. For example, the role of compartmentalization parameter for the degree of system integrity determining is identified. In particular, it is proved that if the system is unsegmented than it has the highest integrity.

Segmented systems have different integrity. "The easiest way to assign a degree of integrity of thesegmented system is to count the number of sub-objects into which the system substrate divides. However, sub-object usually coincides with the part. The boundaries between the parts are quite conventional. Therefore, the number of parts is not clearly defined. It is arbitrary. The problem of finding a certain number as a degree of integrity of thesegmented system can be solved if we form the selection criteria for the sub-objects that should be considered in determining the overall system integrity degree" [3, p.24]. It is suggested that the integrity degree of the sub-object should be taken as such criteria. It is assumed that if each sub-object represents the most complete, i.e., unsegmented system, the number of such sub-objects can be quite particular. It will correspond to the characteristics which may

be called the system divisibility. It is alleged that the divisibility will grow with a number of maximally complete sub-objects, the integrity of the segmented system is inversely proportional to its divisibility, i.e. to the number of the most integral subsystems [3, p.24].

Considering the segmented (having more than two elements) system "homo economicus" we can talk about different integrity degree (inner descriptive or interdescriptive) compared with the maximum level of integrity in any unsegmented system. The degree of connectivity can vary from high (coherent) to lowest (additive) that depends on the specifics of the subject matter and the system representation peculiarities.

Conclusions. Thus, to get a comprehensive knowledge about the object regarding a systematic study, homo economicus is presented as a system; its properties (attribute parameters) are defined. Such stable characteristics as independence, competence, self-interest, rationality, pragmatism can be considered under the context of the studied cultural type systemic manifestations. Scientific assessment of trends and methods of economic behavior management requires a fundamental methodological basis, which is, in our opinion, a systematic approach.

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