STRUCTURE OF NANO-ECONOMY AS A COMPOSITION OF THE SYSTEM OF INTERNATIONAL ECONOMIC RELATIONS

Tatyana Ostapenko, PhD in Economics, Associate Professor,

Department of Management of Foreign Economic Activity of the Enterprises,
National Aviation University, Kyiv, Ukraine

Abstract: The latest phenomenon the nano-economy requires the disclosure of content, consideration of both the system and the isolation of its structure. Note that the structure (from the Latin structuretura – structure is a collection of stable ties of the object, which ensure its integrity and identity to itself, that is, the preservation of its properties with various external and internal changes. Investigates various structures and their development of such a direction of philosophy as structuralism.

Keywords: nano-economy, structuralism, philosophy as structuralism, management and regulation mechanism

INTRODUCTION

Structuralism, as a direction in humanitarian knowledge, is associated with the use of structural method, modeling, semiotics elements, formalization and mathematization in linguistics, literary criticism, ethnography, history, etc.

MATERIALS AND METHODS

Object of study of structuralism is the culture as a set of sign systems (language, science, art, mythology, fashion, and advertising). The basis of the structural method is the discovery of the structure as a relatively stable set of relations; recognition of the methodological primacy of relations over elements in the system; partial distraction from the development of objects. Thus, the structure of the nano-economy is its structure, which, according to the author, consists of elements, subjects and levels as the central relations of the nano-economy system; process and management and regulation mechanism. Figure 1 shows the nano-economy structure.
RESULTS

Let us start the study of the structure of the nano-economy from its central part is a person. Man is the highest degree of living organisms on Earth, subject of socio-historical activity and culture. The essence of man is the totality of all social relations. Man arose on Earth because of a complex and prolonged historical-evolutionary process. Man is the center of the universe and the question arises, *What is the mission of man on this earth?* These philosophical questions become the centerpiece of human studies as the main subject of the nano-economy. Let us turn to the main work on the interpretation and interpretation of the role of a person in economic and general life.

Thus, it is necessary to consider the evolution of ideas about rationality from classics to modern concepts, since this aspect defines the behavior of man as the main subject of the nano-economy. The study of human rationality did not occupy an important place either in philosophy or in the economy until the nineteenth century. Rationality (from the Latin *ratio* – mind) in the tradition that goes back to Plato and Aristotle, for a long time, was simply synonymous with the concept of "intelligent". In addition, thanks to R. Descartes, B. Spinoza and G. Leibniz, this value of rationality is used today. Moreover, even though in the nineteenth century. The term "rationality" began to be used especially often, no special changes occurred in his understanding. Much of this was due to the infinite belief in the human mind and the objectively existing truth, which can only be understood by a rigorous mind. Lobbins, who believed that economic science was not limited to the "materialistic definition", laid the foundations for this trend in economic theory, and investigated "human behavior on the part of the relationship between goals and limited means that might have different uses." Human existence from the point of view of representatives of economic imperialism can be characterized as follows: (1) the person has different goals; (2) time and means to achieve the goals are limited; (3) the resources received can be directed towards the achievement of alternative goals; (4) each time point and different goals have different meanings.

The most striking representative of economic imperialism, the Nobel laureate G. Becker argued, "The economic approach is unique in its capacity, because it is able to integrate many different forms of human behavior... and offers a favorable unified scheme for understanding all human behavior" (Stigler & Becker, 1977). Moreover, he believes that "human behavior should not be broken down into certain individual links: in one which has maximizing character, another one is motivated by stable desires, the other is not persistent, in one link leading to accumulation the optimum amount of information, and the other does not lead. Rather, it is possible to predict that all human behavior is characterized by the fact that participants maximize the usefulness of a stable set of benefits and accumulate optimal amounts of information and other resources in many different markets. One of the main works of scientist G. Becker "The Treatise on the Family" touches many issues. Such as: the division of labor between sexes, the functioning of the mechanisms of the marital market, the choice between the number of children and their "quality", the dynamics of divorces, the role of altruism, and the evolution of the family institute in a long
historical perspective. In Becker's interpretation, each family, as the main cell of the life of an individual, is a mini-factory that produces a "product" using "factors of production" (goods, time of family members, etc.). The time spent on a household is estimated by counting the lost earnings: you can eat at home or work more and do not waste time cooking and enjoying the services of restaurants. However, the strangest thing is Becker's attitude towards the decision-making process on children. The decision to have children, in his opinion, is analogous to "investment decisions taken by rational agents". Children are a kind of "good of durable use", being a source of pleasure and certain expenses for parents, including temporary, for maintenance and upbringing. Therefore, the demand for children is reciprocally proportional to the costs of their retention and directly proportional to the level of income of parents. This, obviously, contradicts the current trend of reducing the number of children in families in relatively rich countries. However, even here G. Becker found an explanation. Higher rates of pay increases not only the income of the family, but also the value of free time of parents. And as "the upbringing of children is the process is extremely time-consuming", the effect of prices" outweighs the" effect of income" so that with the increase in wages offered on the market, the demand for these "benefits" (i.e. fertility) is reduced (Shiller, 1981). Thus, rationality is not synonymous with human behavior, and if so, then not all human behavior will be rational, including because of the language we use.

If not every human behavior is rational, there is a place for irrational behavior. As a result, there may be cases where behavior will be unpredictable and fundamentally non-analytic. Analysis of human activity in this case plays a completely different role. There are four types of human behavior: rational, limited rational, irrational-predictable and irrational-unpredictable. If analytical tools are already developed for the first three groups of actions and they are included in an economic theory to a certain extent (including through the extension of the concept of "rationality"), then the last group of actions by economists is ignored.

For the nano-economics, issues of rational and irrational are also important because people are the core of this system. In this system, a person makes decisions and these decisions can belong to one of four groups. When these solutions are rational, they can be predictable. When it comes to irrational (unpredictable) solutions, the behavior analysis is complicated. Note that the basis for irrational is the conscious and subconscious in the essence of man. This subconscious comes from childhood, when laying the foundations for directions of behavior. Therefore, the baby-economy is the basis for the development of an adult and its economic behavior. About the key role of the unconscious, we find answers to all the leading psychologists of the XX century, i.e. Z. Fretsida (Id), K. Jung ("Shadow"), E. Fromm (need for rooting and the need for and infilization), E. Bern ("Father", "Adult", "Child"), etc. (Foucault, 1999).

Our unconscious personality can play the immediate role in perceiving information and making choices. Complex mental processes occurring in each person, question the possibility of adequate knowledge of the objectively existing world. This is especially important given that in the twentieth century, the very
possibility of the existence of objective values, objective truth and knowledge was put into question. The question of rational and irrational can be considered infinitely. However, it should be noted that a person with his conscious, subconscious and unconscious becomes the basis for the development of the nano-economy. A person starting in a family makes a moral, rational and emotional choice by taking a definite decision. The central question, as the author pointed out above, appears to man in the nano-economy why does a person live? What is the mission of a man in the modern world? These philosophical questions are the key to human development, its economic behavior and the development of such an innovative sphere as the economy of nanotechnologies (which is the third element in the system of the nano-economy).

Let us dwell on this component of the nano-economics system, as a process, namely human life. Note that the nano-economy is an innovative system or its kind, since the goal of the nano-economy is to create a system that would lead to profits through the modification of being. It is known that innovation is an innovation, which leads to a change in the production function (to profit). Innovation is a product or process based on an optimal technological solution. Nano-economics involves considering human life as the preparation, implementation and use of the results of technological solutions that would lead to profit. So, in the childhood, a little person acquires knowledge and skills for the development of creative activities; in a mature age, a person creates and creates new knowledge, but as the quintessence of all human life - the invention of something new, something that was not before, or a change in qualitative and quantitative characteristics (modification) of what was invented before. Of course, such knowledge can be completely different innovations, but in the understanding of the nano-economy, such new knowledge is nanotechnology. Consequently, the process of nano-economics as a human life is a process aimed at creativity, the result of which, in turn, is innovation in various fields of knowledge (from culture and philosophy to nano-technologies and the field of biology or medicine). The highest process of creativity is the scientific and technical creativity. The periods of the nano-economic process are as follows: birth, childhood in the preschool age, school period, sociologization, period of obtaining knowledge about the profession, period of acquiring skills in practical activity, creative period (creation of new knowledge), period of using the results of creativity, transfer of experience to a new generation, rest period.

These periods are united in the following stages: (1) Child-economy (birth, childhood in preschool age, school period, sociologization, period of obtaining knowledge about the profession); (2) Human economy (period of acquiring skills in practical activity, creative period (creation of new knowledge)); (3) Economics of nanotechnologies (period of using the results of creativity, transfer of experience to a new generation, period of rest).

Let us dwell on the interpretation of such subjects of the nano-economy as a group of people and society. A group of people is the environment of an individual in which a person lives, works and creates. The closest environment is the family. Different authors (in psychology and economics) point out the importance of this environment. Is the child expected, does the family perceive a small child, what kind
of education is given to this baby? All moments of education are deposited in the subconscious and manifest in adulthood in emotional behavior. Motivation for work is also a history of upbringing in the family.

Let us remind that a family is a small group based on marriage or blood relatives, whose members are connected by commonality of life, mutual help and moral responsibility. How a stable union arises from the schedule of the tribal system? The first historical form of monogamy in the patriarchal family was guided by the father; including his descendants with their wives and children, as well as domestic slaves. Today, the family relationship with domestic production has been lost; leaving only the organization of life for economic functions, the majority of families consisted of married couples and their children (a nucleic family). Today, the family is transformed into a moral and legal union between men and women. Most marriages are made by personal choices of future husbands and wives, and their equal rights characterize family relationships. The household economy is household management. However, if a family is a group of people, the household may be the same. The emotional climate in the family is the basis for the development of the corresponding qualities of a child born in this family. Conducting a household in accordance with the moral and rational values of the family determines the economic approach to life and the implementation of family traditions. For example, when a little American is born, his parents are immediately placed in a separate room and this little person acquires the skills of individualism. Unlike a Japanese child who is up to 3-4 years old in a parent's room, this is the basis for Japanese groupism. In addition to the family, other forms of groups of people are a group in a preschool institution, school, higher educational institution, enterprise. These groups are also the natural environment of a person who plays a role in upbringing and learning, creativity and work, rest and contemplation of a person in a particular society.

Thus, the preschool age is characterized by a new social development situation, when the sphere of interaction and the circle of communication of the child considerably expands. Communication with an adult becomes much more complicated, acquires new forms and content. Note that activity is one of the main conditions for the development of the child's psyche, as well as one of the ways of studying it. The leading kind of activity of a preschooler is a game. She reaches her heyday in the middle of preschool childhood. Important for mental development are productive activities, labor and educational activities, the preconditions of which are formed in preschool age, as well as communication as a specific activity. In addition, the group in kindergarten provides opportunities for acquiring skills of such activities and the first experience of sociologization of the child.

Entering a group - a high school class is also a stage in acquiring new knowledge and skills. In a class, the child lives a large part of life, gaining secondary education. The school provides an opportunity for the child to decide on the future direction of vocational education. Here special role is played by the competencies that are obtained in the senior school after the 7th grade. These competencies are an opportunity to use experience in practice. Therefore, if a child wants to become a doctor, she pays a special emphasis on biology, chemistry and valeology. If the child involves working
in the field of human-person relations, then the emphasis is on social sciences (history, literature, etc.). Moreover, before the end of school, in large measure, the adult must clearly identify with the direction of further training of the profession.

The next group is a university (or college or technical school) in which a young person receives higher (secondary technical) education in order to realize his or her abilities and aspirations in practice. By acquiring professional skills, a young man tries to get a job in certain business structures, or in those institutions that are leading in a particular field of activity. University science for the sake of science – this principle is not far-sighted. A high school should be connected with the practical sector and have a career bureau when from the first year the student is practicing at certain practical institutions and keeping in touch with them throughout the study and optimally getting to work after them. The connection between universities and enterprises is a guarantee of the education of young people, which will replace the mature and adult specialists. Yes, the next group that unites individual individuals is an enterprise. It is known that the enterprise is the main link of entrepreneurship, because it is the production of material goods and the provision of services. An enterprise is an independent economic entity created to meet social and personal needs through the systematic implementation of industrial, research, trade and other economic activities (Voronkova, Belichenko, Zhelyabin & Azhazha, 2009).

In the process of its economic activity, the enterprise enters into various relations with other enterprises, organizations, individuals. It is an open system. This system consists of individual specialists who are open to cooperation, implementation, and maintenance of principles of entrepreneurship, in particular: free choice of business activity, self-formation of programs of activity and independent choice of counteragents, commercial calculation and own commercial risk, free disposal of net profit, self-realization of entrepreneurial activity. Moreover, with the rest, the next subject of the nanosecond system is society. Society, in a broad sense, is a combination of forms of joint activity of historically formed people; and, in the narrow sense, historically a specific type of social system and a certain form of social relations. Note that society is interpreted as a common activity of people, again, these are the types of activity that change the world and the main form of such activity is scientific and technical creativity. Society consists of certain groups of people, including those listed above and individual individuals. Symbiosis of different subjects is the key to the dynamic development of society. Society is also the highest manifestation of the subjects of the nano-economy, the connection of such societies to the global economy. There are developed and developing societies, but all direct their activities to the development of a highly humane civil society, the highest manifestation of which is the results of scientific and technical creativity and any manifestations of other types of creative life.

The levels of the nano-economy system are, as indicated in Figure 1, there are inter-social relations, intergroup and the relationship of "man-man". Inter-community relations are interconnections between societies of different countries. These complementary relationships create a common product from the system of production of goods. This may be a common fundamental knowledge, applied,
technological solutions for the manufacture of a particular product, namely the production of new products or services or the application of a new production process, new means and methods of using existing or new products and services, consumption of new products. Inter-community relations form the global economy and are international economic relations.

Intergroup relations in society are ties between families, student collectives, enterprises, etc. In the international environment, such links are foreign economic activities of business entities. Within the same society, it is a family relationship when the older generation's family communicates with the families of young people with the transfer of experience in forming family relationships and educating the growing generation. Relationships between student groups are mostly cultural ties within the clubs of fun and smart (KVN), preparation for competitions and other student competitions, which demonstrate skills of rivalry that help in the future an active life. Of course, this is the relationship of cooperation, when children collide with each other creating common results of creative activity.

In the end, the "man-man" relationship is the basis for all other levels of the nano-economic system, and they are the basis for the formation of a family, a student's staff and internal and inter-community relations. Of course, when creating a family, or when heads of states negotiate peaceful coexistence, the factors of interpersonal relations are emerging in the foreground, in which a special role is played by responsibility and subordination to certain living conditions and development.

The entire nano-economy is subject to a certain mechanism of regulation and management, which is part of the structure of the nano-economy system.

As F. Hayek said, "The purpose of intervention is always to achieve a concrete result that differs from what would have happened if the mechanism were allowed to go their own way..." Thus, interference is always an unjust act that forces someone to coerce (usually in the interests of a third party) in a situation in which the other would not have subjected such coercion even for the sake of solving someone's tasks" (Alchian & Demsetz, 1972).

The fact that regulation is an act of coercion, is very important, many are often underestimated. As soon as we assume the probability that human behavior could be irrational, we subscribe in our impotence to divert an incorrect or unfair decision.

According to Rakiashvili (2009), there are justified questions how to minimize the ineffectiveness of regulation and how to determine when regulation is needed, in other words, when regulation is doing less harm than lack of intervention? Speaking of regulation, it makes no sense to consider small groups and simple processes. Obviously, in the interaction of several people to evaluate the effectiveness is quite difficult, if at all we can talk about the existence of regulation. Some researchers point to a certain number of people in a group when conflict situations can be solved by personal interaction, without the development of dispute resolution mechanisms, and regulation. Speaking about complex processes, one should keep in mind such interaction, which requires at least the existence of a certain impersonal mechanism for overcoming the differences of opinion, in which many (thousands and millions) people with different interests and preferences take part.
It may be noted that the regulation of small groups is a process of management (management), when a leader is assigned, who is assigned the function of the strategic planner and the coordinator and controller for the implementation of the decisions made on the tasks. When it comes to managing millions and groups of groups, it is about regulation. State regulation is a function of the state, because in the translation from Latin, *regulo* – I arrange, bring in order and maintain continuity. In the nano-economy, regulation is to bring the nano-economy process into line and make the transition of the baby-economy to the human economy, and then to the creative process of developing nano-technologies.

**CONCLUSIONS**

Thus, the structure of the nano-economy is a multicomponent entity, in which elements, subjects and levels are related to the process and regulatory mechanism. The elements are carried out by different actors at different levels and are interconnected by life perspectives and the process of creativity throughout the life of a person, a small group and the society as a whole. We can mention creative individuals, groups of people and societies as a whole. An indicator of the development of creative societies is an innovative approach to those actions of the nano-economy. Yes, innovation must be introduced and it should be profitable. This also affects different kinds of arts (from literature to artistic creation), because the subject of creativity must be unique and should bring income to the owner. We have been innovating in other, except for the scientific and technical sphere, forms of creative activity.

**REFERENCES**


