

NEW ECONOMIC GEOGRAPHY AND THE LAWS OF ECONOMIC SPATIAL

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The methodology of New economic geography is analyzed in the article. The analysis of founders works NEG allows to draw a conclusion that substantive provisions of theory NEG are formulated on the basis of synergetics methodology. The category analysis of « the economic space» as component NEG also is carried out from synergetics positions. Use of methodology of synergetics gives the chance to raise the question about laws of economic spatial. It is shown that the basic law of economic spatial is the entropy law, the universal law of any system. Entropy conducts that there are asymmetry displays, catastrophic changes and a spatial hysteresis as the precondition of spatial accident initially put in economic spatial.

Keywords: new economic geography, laws of economic spatial

The term «New economic geography» has been used for the first time in M. Fujita's works (1988 г.), P. Krugman (1991 г.) and T. Venables (1996). Today the New Economic Geography (NEG) turns to one of the most interesting and perspective areas of modern economy.

Term NEG involuntarily forces to search the answer to a question – what is the novelty of New economic geography. Thus real novelty of NEG is called by a number of researchers in question. P. Krugman considers that the main advantage of NEG consists in that it helped to change the isolation position which was occupied until recently with spatial economy in an economic science. [1]

The traditional economic geography and the placing a priori theory considered natural geographical advantage of placing in certain territory. The Krugman's new economic geography stands as the corner the got advantage connected with placing in spatial.

Our problem is to pay attention to those moments in model of NEG (reflected not only in works of Krugman, but also Tisse, Fujita, Venables, etc.) who describe specificity of economic spatial. We will pay attention to feature of foreign publications on problems of spatial economy – they are written in the co-authorship of scientists living not only in the different countries but also on different continents – Krugman, Fujita, Tisse, etc. Thus the priority of only German spatial school has ended but today it is difficult to isolate national leadership in this question.

According to Gianmarco Ottaviano, Jacques-Franyocois Thisse the economic spatial is the outcome of trade-off between various forms of increasing returns and different types of mobility costs. [2] Agreeing with this enough simplified definition, it is possible to make a conclusion that the spatial is always subjective, since it grows out of interaction of subjects of the market.

Ottaviano and Jacques-François Thisse have specified definition of economic spatial which has to be understood as the outcome of the interplay between agglomeration and dis-

persion forces. [2] Such definition inevitably demands finding-out the reason of agglomeration forces occurrence and a dispersion, influencing, in turn, on size of economic spatial.

Both these definitions underline in the implicit form basic position – the economic spatial arises as the result of external influences. Thus forces creating spatial operate to different places.

Actually objective properties lie at the heart of these processes of the spatial. In other words, after creation of economic spatial the spatial demands certain behavior for the subjects. We suggest that in this case it is possible to speak about laws of spatial functioning which are necessary for considering in practical activities. As at house building it is necessary to consider, for example, laws of physics and mechanics, and at functioning of the subject in economic spatial it is necessary to consider its laws. To the laws functioning in spatial, we refer to, first of all, the entropy law, the universal law of any system.

We pay attention for understanding laws of spatial functioning and in spatial it is possible on the basis of the methodology complex of various sciences. The analysis of founders works NEG allows to draw a conclusion that substantive provisions of NEG theory are formulated on the basis of methodology concerning a new interdisciplinary direction of scientific research – synergetics. The theoretical description of such properties as multistability, bifurcation, the theory of accidents and a hysteresis makes a synergetics integral part.

Z. Tisse and J. Ottaviano underline that the main components of NEG are:

- 1) circular causality;
- 2) endogenous asymmetry;
- 3) catastrophic agglomeration;
- 4) locational hysteresis;
- 5) self-fulfilling expectations and as result of the home-market magnification [2].

However, these five components of NEG are absolutely new and can't be considered as are characteristics of properties of any economic spatial and have been to some extent reflected in previous works of other authors.

Let's consider each of five NEG components asserting that the properties of economic spatial analysed from positions of synergetics in this case.

It is known that symmetry and asymmetry, the concrete form and the sizes, a site, distance concern specific properties of space of material systems between bodies, spatial distribution of substance, the borders defining various systems. [5]

Tisse and Ottaviano suppose under a circular causal relationship a situation at which firms and house economy carrying out a site choice are guided against each other. As a result the industry site can be during some times explained as result of historical accidents. In technical systems such as circular causal relationship is known as feedback. However, unlike technical systems in which the order parameter is fixed from the very beginning, in synergetic systems order parameters are created by separate parts of system which, in turn, generate order parameter the collective behavior [3]. Thus, presence of a circular causal relationship predetermines presence an order which arises from chaos. In this case we can soundly say that the entropy law is shown in the created space.

Economic practice is the full of examples of the orderliness phenomenon. In the beginning of XXth century in Russia approximately 80% of wholesale trade were carried out at local fairs, that is a certain orderliness was gradually formed of trade elements. Already the economic spatial starts to make certain demands to the subject of economic activities. In particular, round seaport or successfully located transport knot the city starts to be formed. So, for example, there was Novonikolaevsk (Novosibirsk) on the Trans-Siberian trunk-railway. So, the spatial aspires, overcoming chaos, to streamlining. Orderliness doesn't eliminate chaos and coexists with it. Thus, the spatial is characterized by an impulse streamlining because in the ordered system economic return is more over. The economic spatial aspires and streamlining of the form. Well-known A.Lyosha's gives an example about the form of the market in the form of a correct hexagon or a circle. Results of the researches spent to the USA, it shows that market zones have a squared shape or are close to a circle. [4]

Entropy, i.e. occurrence of an order from chaos conducts that in economic spatial asymmetry, catastrophic changes and a spatial hysteresis as the precondition of spatial accident are put.

Endogenous asymmetry means that, as highlighted, small historical accidents may generate regional imbalances even in an otherwise homogeneous spatial [2].

It is possible in any economic spatial to allocate the center (or system of the centers) both periphery and these making spaces develop on to a miscellaneous. It is possible to ask a question – what is more steadily to external influences: the center or periphery? There is a fundamental distinction between behavior of parameters of an order and the subordinated parts eventually in synergetics. Order parameters react slowly to influence from the outside, and parts – quickly. G.Haken believes that order parameters live longer, parts live less (in the behavioural dynamics) [3] In our case, those regions which are to a measure depend on communications with a foreign market of external circumstances are able to instability than the country as a whole.

During the certain period of time the spatial is characterized by unstable balance of supply and demand. Eventually this balance is broken.

The spatial can be considered as dissipative system, i.e. nonequilibrium open system in which unstable conditions are possible. Dissipative structures grow out of an antagonism of two contrasts: a rating of energy environment in system and energy outflow; inflow of weight of reacting substances and their dispersion at the expense of diffusion or a drain of products of reaction. Thus it is possible to explain space occurrence as result of agglomeration and economic activities dispersion in spatial. Differently, under the influence of external and internal circumstances quality, size and the form of economic spatial which aspires to an order, through chaos changes. Chaos is not the destructive factor, and the force deducing on a tendency of self-structurization of the nonlinear environment. Catastrophic agglomeration means that firm location changes in a discontinuous way. [2] Catastrophe is the spasmodic change arising at smooth change of external conditions. Catastrophe means is a qualitative change of a condition at which the order is replaced by instability. The reasons of changes of an order are connected with small influences (fluctuations). Thanks to these influences system gets in one cases orderliness, in others this orderliness, having sputtered out, collapses, thus the system gets to an instability condition. Change of modes of stability and instability occurs in systems where there is an influence from out of.

Concentration of manufacture possesses self-reproduction function. Firms placed manufacture in regions with good access to the market but access to the market improved in regions where manufacture concentrated. If the region economy enough reaches the big scales it can enter the period of cumulative growth. And it is valid, the phenomenon of distribution

considerable disbalance of economic activities is observable in well-known spatial.

We suppose that if the distribution density on spatial is not always low the certificate of economic spatial poor quality. The given situation can testify to low level of a competition, so potential on placing in this territory of any economic objects.

Thus, catastrophic agglomeration is an illustration of circular causal interrelation.

As sign of coming nearer catastrophe the hysteresis can serve. The hysteresis of development of spatial means that it can be interrupted in connection with features of historical accident. Locational hysteresis implies that spatial development can be locked in by historically inherited patterns [2]. Actually the effect of a hysteresis is shown that the spatial develops by inertia though external circumstances have already changed (so the spatial of the USSR has collapsed). The hysteresis is an indicator of presence so-called «an accident flag», in other words, features of behavior on which it is possible to judge approach of a critical point.

Thus the main novelty of New Economic Geography consists that known characteristics

of any economic spatial are explained from new methodological positions. The spatial can be considered as a certain condition, but the analysis of its potential quantitative and qualitative change is possible. Authors of NEG don't spend such division in the obvious form. But the economy characteristic (so also economic spatial) as constantly updated processes is a synergetics integral part.

Therefore, application of methodology of synergetics gives the chance for understanding of the processes occurring in economic spatial.

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