JOURNAL
OF EUROPEAN ECONOMY
Vol. 8 (№ 3). September 2009
Publication of Ternopil National Economic University

New Economy

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INFORMATION AS ENERGY FACTOR OF GLOBAL COMPETITIVE CAPACITY OF INTERNATIONAL CORPORATIONS

Abstract

It is corroborated that the categories of «information», «energy», «entropy» and negentropy (negative entropy) could be used in the process of mechanism creation for managing the international competitive capacities of companies in the condition of globalization. The logic is explained of adaptive and bifurcation evolution mechanisms application to ensure the competitiveness of an international corporation. The role of information resource is defined in holding homeostasis and ensure metabolism of economic system. The matter of competitive status of the company is revealed as its attractive aim that changes its coordinates in spacious and temporal dimension. The availability of correlation is established between the rate of information adjustment, synergy and competitive capacity of an international company. The pattern is offered of strategy transformation of international competitiveness on the basis of information homeostasis control, minimization of entropy, and reaching global synergy.

Key words:

Aasymmetry, attractor, globalization, homeostasis, dissipativity, energy, entropy, information, competitiveness, metabolism, negentropy, development, synergy, bifurcation point, fluctuation.

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JEL: F50.

Introduction

In the conditions of post-industrial society and globalization of economy the information owning becomes of ever growing importance in the competition struggle. The term «information» was introduced in the middle of the 20th century by K. Shennon with respect to the theory of code transmission called «theory of information». One of the first definitions of information within the frames of cybernetic period belongs to N. Winner, who said: «information is the reflection of the substance received from outer world in the process of our feelings adapting to that reflection. The process of receiving and using the information is the process of our adaptation to the randomness of external environment and our vital activity in that environment [1: 31].

Among the most widely spread definitions of information are the following: knowledge, news, algorithm, signal, objective essence of relation between the correlating entities, degree of the system adjustment, fixed (remembered) state of the system [2: 4–11].

In addition to cybernetics, the role of information in the process of sophisticated system transition to new states under influence of random, unpredicted factors (fluctuations) is studied by synergetics. Thus, the synergic subject-matter of information, memory, attractors, bifurcations, fluctuations, equilibrium (disequilibrium), entropy, development, etc. is highlighted in scientific papers by V. Burlachkov, V. Vahurin, O. Honcharenko, N. Hrazhevska, S. Dorohuntsov, S. Yerokhin, S. Kopilevitch, L. Melnyk, W. Reshetylo, W. Tarasevytch, Ye. Khodakivskiy, D. Chernavskiy, O. Shevchuk. The role of information in the process of self-organization and management of the development of complicated systems of different origin is researched by I. Kolodiy, O. Mykhailovska, I. Cherlenyak, and others.

The researches in the field of information economy started more than thirty years ago. It is worth underlining that the information economy deals with asymmetric information, which was admitted only in 2001 in the status of a new paradigm of the economic theory. At that time G. Akerlof, M.Spence and J. Stiglits were awarded the Noble Prize for their researches in that area. The named paradigm cast some doubt on the following principles of competitive balanced market: law of demand and supply, law of single price, law of competitive price, hypothesis of effective markets, etc. The scientific papers by O. Antypina, A. Zahorodniy, M. Yermoshenko, W. Mazurenko, Ye. Matveyeva, F. Myshkina, and others are dedicated to the issues of information asymmetry.

The economic agents today badly need the economic information and mastering the art of taking concrete actions and decisions in the conditions of increased market instability. M. Porter, O. Bilorus, D. Lukyanenko, L. Piddubna, W. Samoylenko, S. Sokolenko, A. Filipenko and many other researches dedicate their researches to different aspects of modern competition trends in the conditions of the globalization factors effects.

From the view that in modern conditions information frequently becomes the critical resource of production and important factor of competitive capacity on global market, a scientific interest arises to studying the interrelation between information capacity of economic system, the structure of its energy (quasi-energy) balance and competing potential of market participants.

Setting the Task

The objective of this research is the definition of the role of information in the processes of quasi-energy balance optimization, and reaching the accepted rate of competitive capacity of international corporation as a major entity of globalized economy.

Research Outcomes

The information arises as «overcome uncertainty» related specifically to random processes, as well as to transformation of probabilities into reality, however, only those which take place in accidental processes (out of numerous probabilities only certain part of them transforms into reality). So, the information is also understood as «decreasing of non-perceptibility». Availability of probable nonstatic approaches in the information theory testifies that the relationship between the phenomenon of information and randomness, and probability is not organic. The notion of uncertainty, when «filtrated» from randomness and probability, consists in the characteristic of «perceptibility- non-perceptibility». The information «appears» where there is a diversity, inhomogenuity, when at least two elements as a whole differ; the information «disappears» in case when the objects are identified [3].

So, the notion of information is closely connected with the notion of diversity: the nature of information reveals through the diversity, and a volume of information mirrors a volume of diversity. At that, we should account for the regularity implying that the more complicated the system is, the greater reserve of information diversity it should have to ensure its sustained regulated state.

The understanding of information as the diversity is closely connected with the most general idea about the movement as an inevitable, directed and

natural alteration. So, the consequence follows, that the alteration of the informational content of the system is a numeric criterion of the development. Emerging of intent stabilizing factors within the system is directly connected with the effective use of information in the process of its functioning. The part of information which is related to the parameters of order and reflects the collective properties of the system is called a synergetic information. Under condition of application of this information the element characteristics are selected to ensure the required tendencies of the dynamic development of the system. From other viewpoint the criterion of the development could be also the qualitative aspect of information. To have the system evolved, its instructive capacities characterized by the value of information against the amount of information is essential. Piling up information is equal to enlargement of new elements with established characteristics. Therefore, one of the conditions for the emergence of self-organization is actualization of information of a certain quality (value) [4; 5]. In its turn, the self-organization is a process of spontaneous structuring of chaotic processes, adjustment of internal structure, flows of energy, as well as information as a result of cooperative actions and relations between the components of the system.

The development of management mechanism of the company's competitive capacity is also related to the category of «diversity» of the object and the subject of management. Consequently, the process of competitiveness management is based on the principles of self-organization, i. e. cooperation, coordination, non-linearity, complexity and openness of systems. Knowledge of system-wide principles of self-organization enables within the vague conditions of the development of the system, which functions under effect of certain destabilizing factors (fluctuations), to find and utilize optimal internal reserves sufficient for the system self-structuring without great material and temporal resources.

In the process of coordination the marginal case is mirrored in the situation when the potential possibilities of the development of the directing subsystem are exhausted, while the demands to the latter are not met. That is the situation when the complexity of the problem of competitiveness increase exceeds the complexity of the system for competitiveness management. In that case the management system reaches the bound of «potential effectiveness», and resolving the problem needs extension of the range of «potential actualization» through applying new methods of interaction, either means of influencing business environment [6: 242].

In general, the development can be interpreted as change of states of directed and directing systems in the following two plains of states – information and material-energetic. If the resources (energetic, material) are insufficient to compose the final state set by the objective, then the objectives become unachievable. So, in I. Cherlenko's opinion [7], the execution of purposes could be regarded as a resource and energetic characteristic. The enterprise, being an open system, can succeed in achieving its objectives when the system is able to use and to attract to the use the required amount of material, energetic, and information resources.

Taking into account the resource, which is restricted in each point of time, shows that the composition of the resources to be used and which are accessible at the moment, directs the events in certain «streambed» of potential possibilities. But alongside with imposing the energy-resource limitations there emerges the possibility to open new layers of complexity revealing new dimensions for resource channeling and, accordingly they precondition the improvement and fall of the company's status.

Consequently, the development process to some extent could be modeled through the process of information transfer. In addition, the competitive capacities of the organizations are rated through the ratio of occasional to continuous changes [8: 228]. Occasional changes are viewed as a result of the organization's deviation from the state of balance, in coordination of its activity with the environment, either intervention of that environment into its work. Continuous changes are of cumulative character and are connected with constant adaptation of many elements concurrently, which ensure the immensity of changes.

In the process of the system adaptation to new conditions of competitive environment its structural and functional adaptability is being created. When the change of system's parameters exceeds its adaptive capacities under the influence of external or internal fluctuations, then occurs the state of instability, that is, the bifurcation point. In the bifurcation point the instability emerges since the fluctuations increase, making the system parameters exceed their critical indices, and bring about the jump-wise transition to a new stable state with less entropy. The instable system that can not resist fluctuations is deprived the ability to adapt, and it quickly ruins, while the super stable system, which suppresses any fluctuations, conserves its structure, and behavior also is not able to change qualitatively. And thus, both types of the systems could transit to the state of chaos and explosive growth of entropy, which implies that the change of competitive status through chaos and order alternation is inevitable.

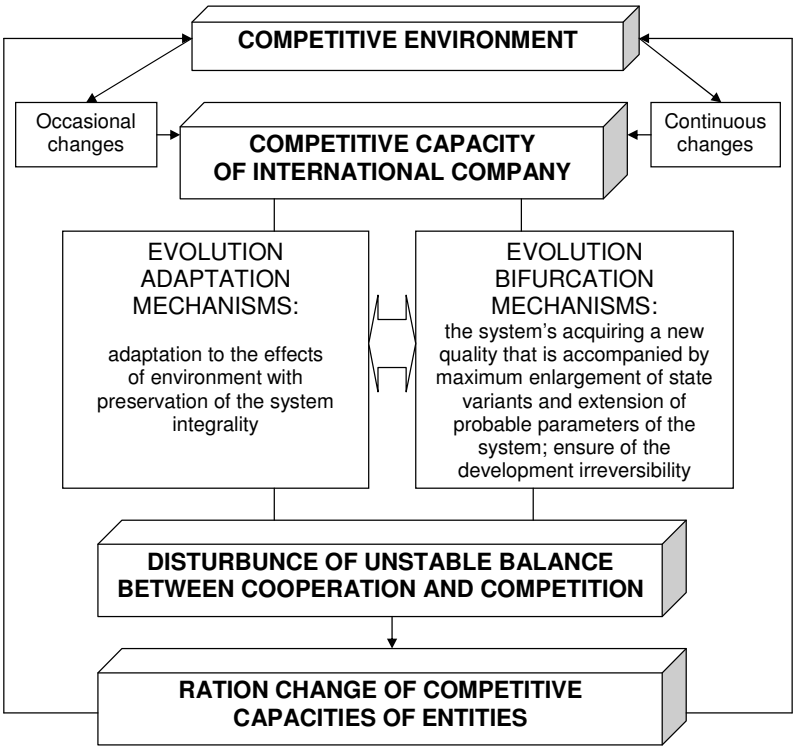
That approach corroborates the interrelation between the notion of chaos, order and competitiveness. Moreover, it reveals the logic of application of adaptive and bifurcation mechanisms for ensuring competitive capacity of International Corporation in the condition of fluctuated global environment of functioning. From that view, it is worth underlining the objectiveness of competition and cooperation interaction as a key contradiction in the dynamics of modern competition. We agree with V. Samoylenko's opinion that in the conditions of dynamic changes of a market state, the balance between cooperation and competition is unstable, and it remains unchanged till a regular alteration ration of the entities' competitive capacities (fig. 1). The noted shows the dynamics of competition as a part of the market dynamics.

The peculiarities of market interaction are connected with the competitive «code» of its organization that is the competitive potential of interaction, competitive mechanism of interaction, and competitive character of the interaction results. L. Piddubna [6: 23] interprets the competitive potential as the market identification of the entity's state from the position of its preparedness rate to the

functioning in market conditions. The rate of the entity's competitive potential conditions the process and the result of competitive interaction. The entity would not be able to carry out the function of market interaction when it is deprived the required competitive potential.

Figure 1

Mutual interaction between the changes of competitive environment and competitive status of a market participant



In the context of competitive capacity a significant importance belongs to the mechanism of homeostasis which is grounded on the balance of external and internal final outcome streams in the system. In case of discrepancy between the resources and the environment conditions the system can not be in the state of dynamic equilibrium (homeostasis) under the existing environment conditions. Transformation of the homeostasis rate occurs in case when the adaptive capacity of the system (or its energy parameters) is insufficient to hold

under certain changes of the environment the sustained level of homeostasis through the mechanisms of negative connections. Accordingly, the system itself has to change. In case of mechanism action of positive reverse connection the system is restructured having changed, at that, the level of homeostasis (at the moment achieved the competitive status).

The homeostasis support is a precondition for meeting the objective and the functioning outcomes, required and sufficient for active positioning of the system in the competitive environment. Consequently, the significant system-creating instrument of competitive capacity research is modeling of homeostasis economic system and support of sustainability in the conditions of undesired fluctuations of their functioning efficiency [6: 62]. On the other hand, the system should be able to perform exchange (metabolism) with the environment. The system openness and its metabolism create the energetic basis for the process of development.

It follows that in the process of the company's movement to the desired rate of competitiveness there occurs the combination of two opposite principles, i.e. self-development and self-organization. The self-development, that is internal required spontaneous change of the system (ability to produce the objectives of its own development and the criteria of their achievement, and also to change the parameters, structures, and other characteristics in the intended direction), is impossible without self-organization, that ensures the state of stability under which the system is able to accumulate the energy needed for further changes {fig. 2).

In the analyzed context the information is a phenomenon of the structure, defining the adjustment of the elements of the object. The critical characteristic of the structure is its relative duration which implies its preservation in the process of change. Nevertheless, the structure contains a certain dynamics, ability of temporal and spacious expansion of new characteristics of the elements. As V. Burlachkov [10] argues the latter means the transition of the aggregate of random interactions into the system, implying the structure with constantly interacting elements. Structural properties in their turn is a form of energy existing, while a structure is a form of interactions existing among the elements of the system, i.e. it is a form of information existence. Any new interaction enlarges information. Information coming from outside also changes the system of internal interactions, thus effecting the energy. The actual economic system is responsive to external energetic and information influences. Moreover, the interactions among the elements condition the creation of new information. At the same time, the complicated effect of external and internal information «switches on» the potential energy of the system (fig. 3).

The information changes coming to the system influence the dynamics (i. e. energy) of the system, which allows arguing that there exists interaction between the energy and the information. A vivid example of energy-information interaction can be considered as the entrance of information on the market and its influence on the fluctuation of demand and supply volumes, and respectively, on

prices and exchange rates. The flows of data defines the behavior of economic agents, and their further actions condition market fluctuations which could be interpreted as the fluctuations of potential energy. The energetic indices mirror specifically capacity potential to carry out work. However, in order to become a concrete result, implying improvement of adjustment of the system, the energy should be connected to internal (endogenous) factors of the system itself. At that, the critical importance belongs to the algorithms of realization of energetic temporal and spacious impulses. Since minor change of the vector of energetic flows direction either temporal unsynchronization by some units of the second of energy flows interactions of different directionality can lead to significant change of the final state of the system. Imaginative «switching on» and «switching off» the energy occur as a result of qualitative changes taking place in information flow, that is in its structure [10].

Figure 2

Combination of self-organization and self-development processes within the company's movement towards the desired rate of global competitiveness

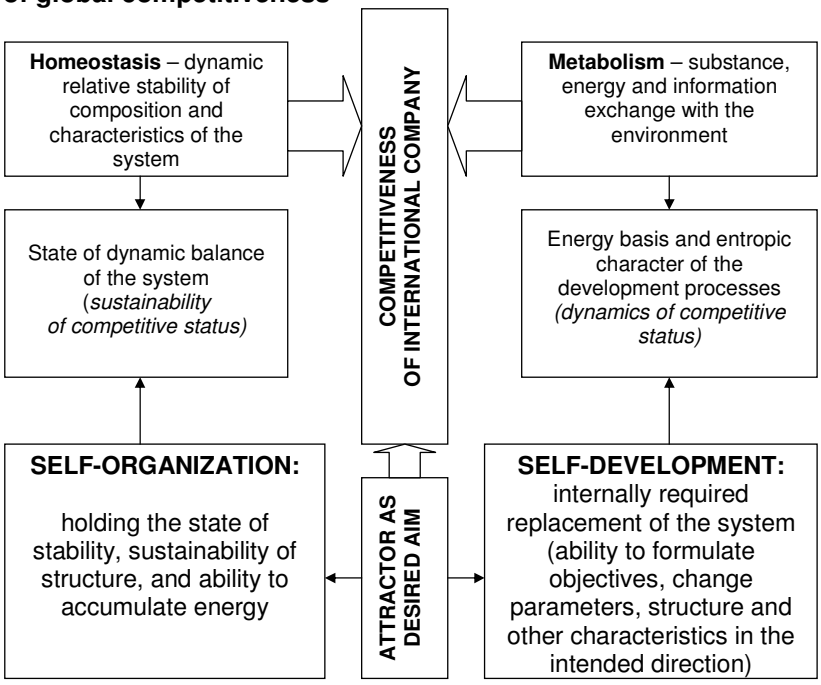
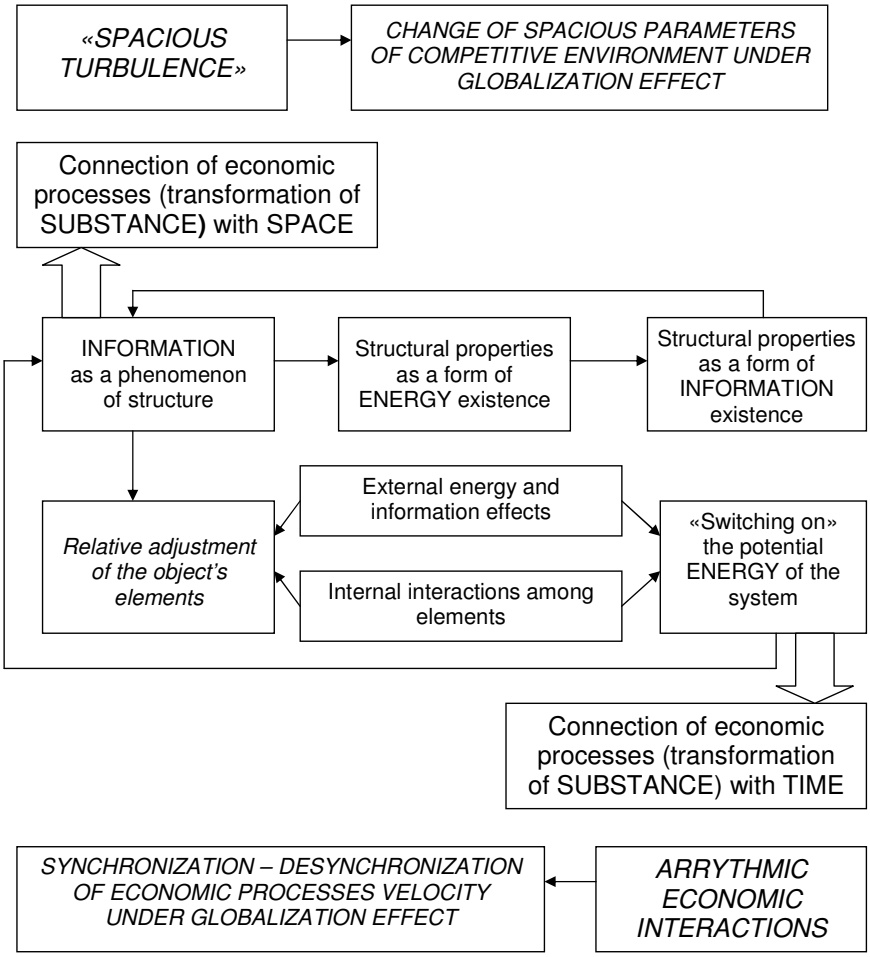


Figure 3

Complicated interrelation between information, structure, energy, substance, space and time in the processes of economic development, and respective changes of competitive potential of companies



Thus, the structure-building elements of any economic system ultimately are the following: substance, energy and information. The information component in this context connects the material elements of the system into the system-base whole, ensuring its adjustment and dynamic temporal and spacious stability. Therefore, the main intended purpose of the information basis is to direct the processes of metabolism [11: 24]. The improvement of information adjustment of the system conditions the change of spacious structure of the sys-

tem and information program of temporal functioning of certain parts of the system. Similar restructuring is connected with the change of the system's homeostasis rate, change of degree of diversity and complexity of the system. The economic progress is always characterized by interaction of identified elements-parameters, since the economic processes have in their basis the process of transformation of the matter which according to economic theory is connected with space, while energy is connected with time [11: 199-208].

A new quality of information epoch refers to recognition of a new model of social time, that is, a new measure of time dimension. What is implied is not only radical speeding up of transaction processes, but also their arrhythmic properties, i.e. combination of double tendency, on the one hand, of synchronization, and on the other hand, desynchronization of velocities. The arrhythmic property resists the increasing dissipativity of the information and economic process, on the one hand, while on the other; it resists the accumulation of peculiar to complicated systems chaotic phenomena in the world economy. Speedy arrhythmic property of economic processes also corresponds to «spacious turbulence». Principally new functional relations are crated among the definition of place and production practice (mode of production), geography of work spaces, investments and financial and commodity markets, company structures, and institutional positions. Accordingly, each individual economic agent develops the own (individualized) criteria for determination the economic processes durations, in particular, the virtualization of economic space is implied [12].

Referring to the laws of quantum mechanics, I. Hladiy argues that only capital and information as energy bunches do not fall under the effect of time and either could or could not be in a certain place at one and the same time [13]. Since capital and information became the fundamental factors of economic development throughout the world, we can observe the tendency to market entropy increase. It allows concluding that information is a kind of catalyst for the capital self-development as a dissipative structure and a leading attractor of structuring of a new quality global economy. Therefore, the relationship between the rate of the company's provision with capital and the rate of its compatibility on the global market can be considered as non-linear.

In our opinion, the required level of competitive capacity on synergetic market could be reached through the optimal combination of spacious, temporal and information-energetic parameters of the system development. (According to V. Reshetylo , the market can be considered as synergetic, where the majority of value volume makes intellect, innovations and information that are non-linear accumulating [14: 10]). In its turn, reaching the required competitive status of international company could be considered as an attractor, implying the state which is being created by the system together with the environment and which could be reached if all initial conditions of external and internal environment were perfectly constant within the duration of the system's movement towards its aim. Instead, on the way to the attractor the systems in natural conditions undergo some random or predictable occurrences, which immediately change the attractive aim; the aim of the system development becomes undetermined,

movable in appliance with the coordinates. Following from that, to keep a high competitive capacity for a long time and on many markets simultaneously is a very great challenge.

The problems of low competitiveness index on international level are considerably characterized by narrow information area of the managerial system when the decision making completely depends upon the volume of information on how the competitors act. «Focusing» on that chain of information provision significantly restricts the information potential of economic system. Moreover, under condition of deficit and insufficient information quality the system becomes unstable, and thus the threat arises of its entropy and collapse. In particular, the reasons of the competitive capacity decrease of the international company can be identified with the following three types of entropy:

1) thermal entropy – when the system decreases the efficiency of functioning without changing of its structure and quality of the performed functions (the energy consumption increases for performing one unit of work);

2) structural entropy – when the structure is disturbed, the system can «loose» some functions performed and/ or worsen the quality of their performance;

3) information entropy – when under the system structure preserve the relations between its chains break, and as the result, the quality of the function performance worsen by certain subsystems of the system.

The term «entropy» allows to cover not only energy, but also information implication . Due to that, the notion «entropy minimization» can depict not only the consequence (minimization of energy dispersion), but also the reason (due to maximal consolidation of information or maximal increase of the system state organization rate).

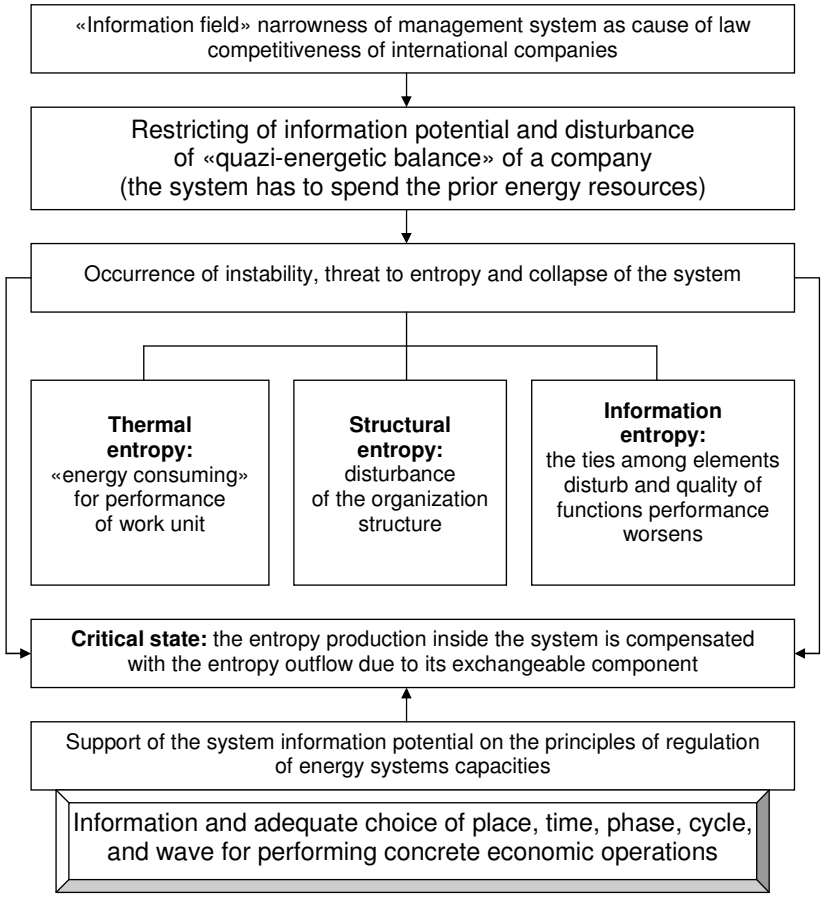
It is worth noting that the state of the system is formed with two following factors: entropy that is produced inside the system, and the change of entropy conditioned by external exchange. The critical state of the system is achieved when the entropy production inside the system is compensated with the entropy outflow due to its exchangeable component. That condition can be viewed as the required precondition of a time-independent state of the system. The system is in the time-independent with zero production state when in every moment of a certain period of time the production of internal entropy comes along with the entropy decreasing due to exchange processes with the environment. In other words, the stable time-independent state of the system is reached when for interminable short period of time the entropy does not increase [15: 231–232].

We completely share L. Piddubna's idea, that regulation and support of information potential of the system of the company's international competitiveness management is to some extent similar to the regulation of the energy systems capacities, the essence of which consists in the system matter of information area as a whole [6, p. 255]. It is worth noting, that the optimal international competitiveness management does not depend on power and energy, but it rather

depends on topologically accurate organization (information adequate choice of place, time, phase, cycle, and wave) and rate of reaching the responding effect meeting the internal trends of the development of complicated economic system, and which is accurately distributed in space and time [11, p. 256] (fig. 4).

Figure 4

Logic chart of problem diagnostics and introduction of information and adequate international competitiveness management



As O. Honcharenko argues [16], the development of information matter in order to transform it into energy required for all open time-independent systems allows to resolve the problem of efficiency increase for functioning of economic systems and reaching the sustained development through increase of the information component in the system. In this context the processes of transformation of information into energy and vice versa is of critical importance. While information is a rate of the system adjustment, the latter is created through the difference of energy potentials which is fixed in memory; the energy is a total quantitative measure of movement and interaction of all kinds of substance. The connecting chain in this process is entropy as a probability rate for the system occurrence in a certain state. Since the entropy is a quantitative measure of information, the energetic state of the system is directly related to the probable distribution of the states of elementary particles, and that characteristic is an information parameter. Thus, the principle follows, that the lesser entropy index corresponds to greater amount of information, which fixes the certain state. The information adjustment can be viewed as a stable, organized in space and time direction of flows, which provides for availability of certain coordination of information program. The role of that program, in our opinion, can be played by the company's strategy of international competitiveness.

The work performed by the enterprise consists in «getting» the energy and information flows Meanwhile, the energy and information transform into energy-information flows of higher quality which are measured through the value of final product. The matter of the noted processes are reflected by the categories of costs (labor, energy), invested for performing work, likewise the income (so called free energy of environment as an objective and outcome of the enterprise activity. The improvement of energy quality that is accompanied by the increase of its potential capacity to perform work (to lower entropy) means the increase of the energy informative capacity. Consequently, the information flows are the organizing impetus for the transformation processes. Functioning of economic systems corroborates that the information component of the production process is able to change the energy one on account of (due to) the saving of the resources and decrease of entropy in the system of non-material production processes [16].

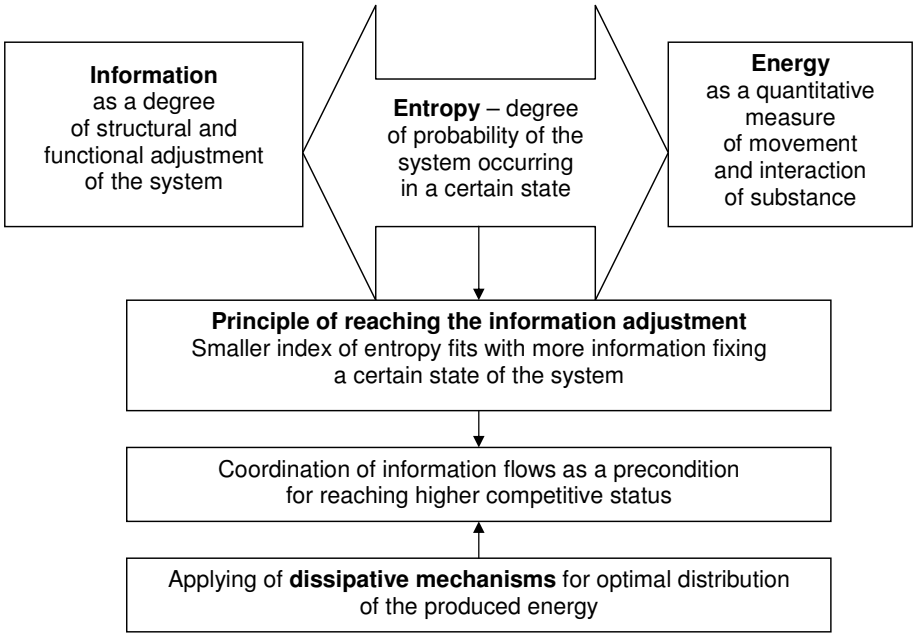
If the system transits through stochastic (probable) fluctuations from more probable state into less probable (imbalanced with the surrounding (environment) the entropy falls, while the information substance of the system extends. The greater the entropy is, the greater uncertainty is, and the lesser number of «tied» free information within the structure of particular system, likewise that, which circulates in it. The loss of information because of the entropy increase in cybernetic aspect is like decrease of the rate of the system adjustment, which is similar to the increase of the disintegration process. Accordingly, the increase of competitive capacity requires the minimization of entropy, implying the maximization of information and minimization of energy dispersion. And that, in its turn, allows making the conditional parallels between the mechanisms of competitive management and mechanisms for regulation of entropy/non-entropy processes. In particular, the choice of certain state (vector of change) is according to the

principle of dissipativity, implying that out of total probable system states specifically that are actualized which meets the minimal energy dispersion. Just being in that state the system is able to minimal production of entropy specifically the minimal dissipation of energy.

To adapt the introduced flows to the system the latter should have certain mechanisms available (dissipative forces), which distribute the introduced energy according to the components and subsystems with certain rate of equality. The dissipative forces are able to disperse the incoming flows into significant spacious segments and distribute them according to the degrees of freedom of the system components [17] (fig. 5)

Figure 5

Logic of energy and information flows management for reaching higher competitive status of the company



Accordingly, increase of the system adjustment is nothing else but increase of its informative capacity. The information incoming to the system increases its adjustment and decreases its entropy [15: 219–221]. It allows to conclude, that the company's selection of required strategy of international com-

petitiveness promotes improvement of actions adjustment on the international market, and at the same time it needs owning a larger volume of information about the environment .

The amount of the system information or the degree of its adjustment is defined with the term of «negentropy». The external activity of the system in negentropy production is considered to be a function of efficient dissipative activity. Specific (with every passing moment) growth of negentropy that the system reaches due to the exchange with the environment, is in direct proportion to the volume of resources that income to the system for a time unit, and in inverse proportion to the parameter that characterizes the achieved level of information adjustment. In fact, the larger scope of the international corporation activity is, the more efforts it needs to keep the achieved competitive positions (specifically in the areas with multinational competition). But, on the other hand, the global strategy can allow the firm to achieve the scale effect easier and to lower the cost level per one unit of production.

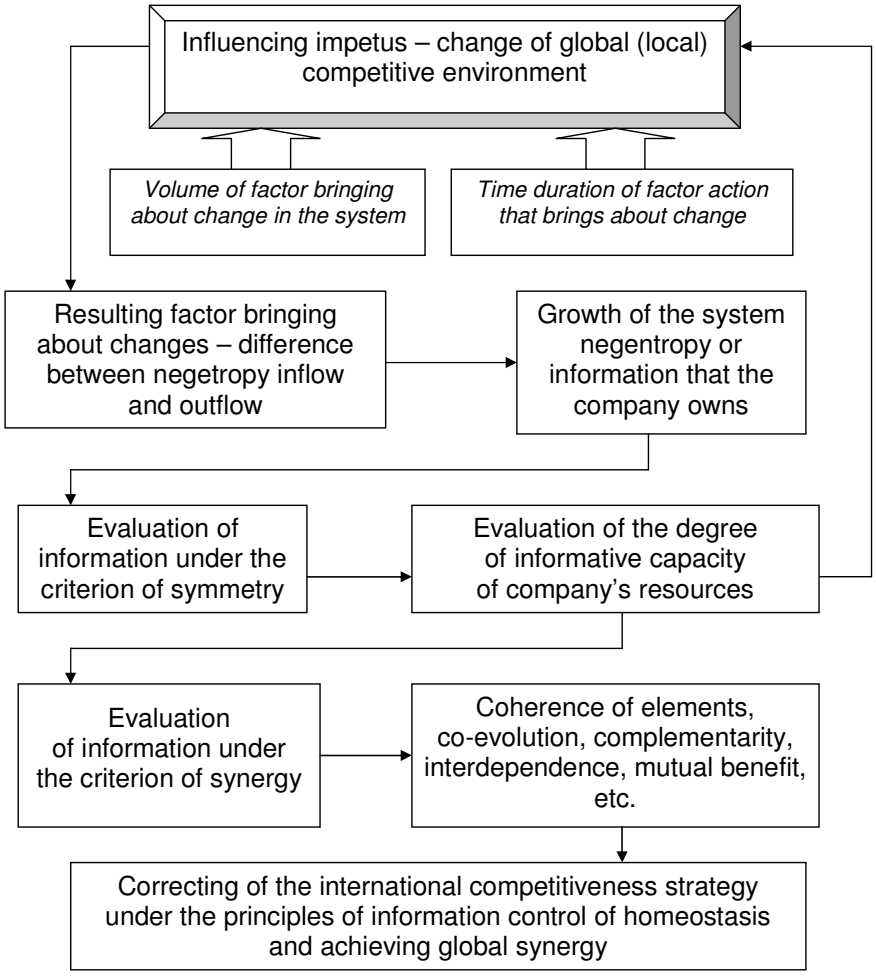
The resulting factor on the level of the corporation which causes the changes in a competitive position could be considered the total difference between the inflow and outflow of negentropy. That is the growth of negentropy or information the company (system) owns. Pertained to the time unit, this value characterizes the rates of negentropy (information) growth within the system [15: 243]. From economic point of view that index can show the increment in profit for a time unit. The latter depends upon the income that the company yields for each type of goods and the volumes of resources which the company «passes through», demand for the products, price level, competitiveness intensity, etc. The current changes in the noted indices either obviously or implicitly push the company to search new information with the prospect to alter its strategy of international competitiveness (fig. 6).

While compiling and analyzing data, the managers of the company obligatory should take into account the phenomenon of «information asymmetry», implying the situation when certain economic entities own the majority of market information. The information asymmetry, being a specific form of uncertainty, complicates rational behavior of economic agents and conditions arising of additional transaction costs, eventually leading to inefficient market functioning, and thus, it can become the reason for limiting the competition.

In the process of the development and change of the strategy of international competitiveness it is feasible to analyze the effects generated by the information asymmetry, i.e. adverse selection and moral hazard. The adverse selection consists in the mechanism of a wrong selection of a counteragent or a partner that brings about risky relations (so called, pre-contract opportunism). The moral hazard (post-contract opportunism) is a possibility for one party of market relations to reap extra benefits after concluding the agreement because the other party can not control the actions of the first one [18].

Figure 6

Logic of transformation of international competitiveness strategy under the effect of market dynamics



Thus, in case of detecting the signs of the information asymmetry, it is worth developing the mechanism for information flows optimization. In this connection it is good for the company to apply the information resources of search systems to get the knowledge that is not available in the given information environment at the moment. The required precondition of the system progressive development is its capacity to perform the information control over homeostasis state. The information control over homeostasis can be considered the process

of holding the state of a stable balance on the basis of the idea or the leading information principle, enabling to spend the substance and energy much lesser against the metabolism level of the system, that is the material and energy exchange between the system and the environment. The main objective of application of the directing information principle is to determine the temporal and spacious combination of high quality and low quality energy flows (information, financial funds, material and energy resources) to provide the minimal expenditures of the system for keeping the state of a stable balance [15, p. 263]. The control over the degree of the resource information capacity should be viewed as a critical attribute of the international competitiveness management.

The capacity of the system to create a structurally and informational materialized new quality is defined with the term of «synergy». In other words, the system, which due to the interaction of internal structural qualities and the flows is able to create new productions needed to support the evolution process, is synergetic. The new productions are understood as the products of vital activities arising in the system depths, and are «new» or important from the view of the evolution flow. The synergy ranks the evolution capacity of the system, its ability to correct the objective and resources, and to create the conditions for correspondence of the resources and the objective [19]. Accordingly, in the process of managing the international competitiveness of the company it is worth accentuating on the preconditions of synergy generation, the phenomenon that is traditionally related to the coherence effects of the elements, co-evolution, complementarity, interdependence and mutual benefit.

Conclusions

Generalizing the outcomes of the research, we can argue that the processes of managing the global competitiveness of international corporations could be based on the principles of the analysis of energy-entropic balance that provides for relationship between the rate of the system information adjustment and the indices of its effectiveness. Dynamism of modern competitive environment conditions the necessity of openness and metabolism of economic systems, while desire to hold the achieved competitive status makes the managers maintain the homeostasis level equal to the state of the system. In addition to the noted contradiction, it is worth focusing attention on the fact that the forces of cooperation and competition are in a rather instable balance under conditions of globalization. Therefore, the competitive capacity of the company transforms through the following two classes of evolution mechanisms: adaptive and bifurcation. The bifurcation point provides a critical moment when the system makes its selection of the trajectory for its further development, and even minor fluctuation could turn the former market «outsider» into the leader, and the companies of high competitive capacities could lose their high competitive status. Coming up to the desired level of competitiveness can be viewed as the attractive objec-

tive of the system, though the deficit of energy and material resources can make that aim unattainable. Thus, the problem comes to the fore to create the mechanism of information transformation into energy and reverse. The key role in that mechanism could the phenomenon of entropy play, and that conditions decrease of information and growth of uncertainty. It means that there exists the reverse connection between the level of entropy (inevitable energy dispersion) and the adjustment rate of the system (as basic criterion of its competitive capacity). Therefore, the improvement of the system organization through increase of its informative capacity can be interpreted as the condition of its high competitiveness. It is just that postulate which is recommended to be taken for a basis in the process of formation and transformation of the strategy of the company's international competitiveness. While analyzing change of competitive environment and correlation between the forces of cooperation and competition, it is feasible to assess the probable growth of negentropy, or the information the company owns. At that, the evaluation of information under the criteria of symmetry and synergy that allows to exercise control over homeostasis and minimize the dispersion of energy. The attained research results can serve the basis for the mechanism development of managing the competitive capacities of the companies from the positions of quazi-energetic balance regulation.

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The article was received on September 8, 2009.