Self-Developing Systems in The Conditions of Anti-Recessionary Management

Alla Podgornaya*, Svetlana Grudinaa

*Kazan Federal University, K.Marks,43, Kazan 420111, Russia

Abstract

The work relevance is caused by the necessity to develop the technologies of anti-recessionary management in order to overcome the problems in managing the innovative enterprises during the systemwide crisis concerned with a new stage of market economy development. By informal criteria currently about 2/3 of Russian enterprises are in a crisis, pre-crisis situation or are potential bankrupts. The problem of the choice of anti-recessionary strategy is often underestimated which leads to the necessity of prevention measures. The purpose of the article is to analyze the possibility of accumulating of an enterprise anti-recessionary potential by means of creating the self-developing systems from a perspective of the system approach. The research problems are to study competitiveness of self-developing systems, and to determine the features of forming the anti-recessionary immunity, conditions for change to forming the self-developing systems. Original Contribution of the concept consists in developing the system approach to anti-recessionary management, working out new positions of overcoming the pre-crisis situation. Methods: analysis and synthesis methods, and also an abstract-logic method were used when carrying out the research.

© 2015 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and/ peer-review under responsibility of Academic World Research and Education Center

Keywords: enterprise, anti-recessionary management, self-developing system, crisis prevention

1. Introduction

The Self-developing organisation is a highly adaptive organizational structure, capable to modify the structure in the shortest terms. In this context we define anti-recessionary potential as the ability of an organisation to adapt or ability to predict reaction for accidental influences of economic factors, when even dangerous incidents turn to possibilities. By its complexity, risk level and instability of many components management of such organisation

* Alla Podgornaja. Tel.: +7-843-236-83-47
E-mail address: Alla.Podgornaja@kpfu.ru
logically generates the question on maintaining of hard mechanistic structure of the organisation or developing of authoritarian model of management in the conditions of uncertainty as the hard structures based on formalisation of management possess stability. However there are many examples of destruction of the Post-Soviet organisations with difficult to trace beginning of destruction and fast unavoidable crisis of the system.

2. Author Artwork

Interdisciplinary researches allow economists to receive the answer to this question by researching mechanics and dynamics of destruction. We understand destruction as the process of complex internal reorganisation with internal relations break-up under the influence of pressure (Kirshin, 2013). We will consider the researches concerning a new science, called mechanics of destruction in order to be able to predict the destructions, to warn such situations, to form anti-recessionary potential. For today there is no similar direction in management of the organisations though the given laws also operate for organizational structures.

At the initial stage the linear mechanics of destruction acts. This is very small, point destruction without external deformations of the system construction. Therefore the destruction range of the organisations with hard structure is rather difficult to predict. The further research shows that such destructions are very seldom. In most cases the destruction affects the external change of the structure, the so-called ductile destruction or plastic deformation. It is observed in plastic structures, the deformation can divide the structure, for example, into two parts (Bagautdinova 2013). The destruction occurs in the course of formation, merge and distribution of internal particles. In management it is comparable with employees’ internal burning out, gradually losing the intent, the personal importance and externally they express guardianship, without the intention to leave the organisation, consuming its resources.

Ductile destruction is more visible and controlled, therefore it is less dangerous. In this case there is no need for forming the anti-recessionary potential of the organisation, it is enough to assume the known anti-recessionary measures of management. In the mechanic of destruction the cracks having fractal multidivisional structure are researched and here the description and forms of linear mechanics of destruction are not so applicable. In this case the elements of irrational behaviour of employees are fractal and consequently the linear and nonlinear destruction of the system. To our opinion, it is the most adequate destruction of the destruction processes gives the nonlinear mechanics of destructions. It researched the properties and behaviour of fractal structures, together with the synergetic which studies the processes of evolution and self-organising of difficult systems. Thanks to synergetic the interdisciplinary approach became possible. In nature the balance law is observed, mechanisms of destruction of materials are predetermined in the course of their forming. For the organisation it is errors on a phase of idea or an initial stage of life cycle (Avdonina, Grudina & Podrornaya, 2013).

The immensity and multivariate of destruction, as well as of creating, their diversity for the organisation complicates the destruction identification at early stages or forms a special community of managers (more often top-managers) who are not concerned by destruction. However these levels are subject to destruction faster than the others, they generate the administrative mistakes which lead the organisation with hard structure to final destruction. Besides, hard structures are loosened by chaotic turbulence – micro changes cause macro destructions and that leads to inability to survive in the conditions of uncertainty and chaos.

Forming the anti-recessionary potential of self-developing organisations is caused by set of factors. And one of important factors of such potential is the solving the problem of forming modern economic and "innovative" thinking (Kalinauskas, 2012). These organisations as systems are constantly developing. They are subject to changes, but changes with the changes are positive as adaptation in the conditions of the uncertainty, which accompanies the organisation throughout all life cycle, promotes realizing the innovative and anti-recessionary potentials.

Let's consider forming the anti-recessionary potential of a self-developing organisation. Table 1.
Table 1. Forming the anti-recessionary potential of a self-developing organisation by Podgornaya, Grudina(2013)

<table>
<thead>
<tr>
<th>Stages of forming a new organizational system</th>
<th>Controlled processes</th>
<th>Level of additional costs / Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organisation works steadily, changes tend to zero</td>
<td>To preserve former level of competitiveness it is required more and more investments. Preconditions for changes are formed</td>
<td>Additional costs grow, but are not maximum</td>
</tr>
<tr>
<td>The beginning of changes, appearing resistance in the organisation</td>
<td>Counteraction of old and new mindsets in the organisation</td>
<td>Costs are maximum and purposeful, pressure methods are used in several directions simultaneously.</td>
</tr>
<tr>
<td>Irreversibility of changes</td>
<td>Forming new organisation, solving the current problems</td>
<td>Minimum additional costs, management at level of fine signals</td>
</tr>
<tr>
<td>Appearing of new system</td>
<td>Support of new parameters, the changes control</td>
<td>Average-variable costs, except for force majeure ones</td>
</tr>
</tbody>
</table>

Experimental introduction of fractal system of relations becomes possible for the organisation at the following stage (Roy & Priya 2010). Construction of the plan and complete system with actual results, certain organizational structure, start and adjustment the new structure with minimum resources providing and the maximum capability to create resources for new projects. In the given structure it is possible to distinguish three equal in rights and equivalent management channels: hierarchical, horizontal, anti-recessionary. In self-developing structure each person occupies a certain hierarchical step and co-operates with the others on an equal basis, that is flat-hierarchical principle of construction.

The most difficult stage for forming the anti-recessionary immunity is the system crisis. As a rule, quality of accepted decisions not always has time to increase to rescue the enterprise. But if we consider life cycle of a crisis spiral, divide it into phases, then it is possible to see the signals and to manage the crisis development, following the chosen strategy.

Development of a crisis spiral is possible on the basis of the expectations forming a trend of the following crisis development. Not only event approach, but also its expecting, influences the internal environment. It is difficult to predict what will have the strongest influence: the event or its expecting. It is the first phase. In the second phase there is forming of a crisis spiral, in the third there is strengthening of evidence, in the fourth there is the peak activity of crisis and the fifth is a finishing stage.

One of tasks of crisis management is creating the innovative-technological mechanism of development of Russian enterprises. It consists of solving the two primary tasks: introduction of innovations and investments control. The first task is partially solved by purchasing innovative technologies abroad. However it is known that there is private agreement not to let modern technologies to Russia. It is justified by insecurity of ownership rights and unwillingness to help the competitors. Available Russian technological analogues though are much more accessible at the price, but differ in quality and length of life. Having bought innovative technologies, the enterprise becomes completely "under control" in production as modern contracts do not allow to improve technologies. The following scheme more often works: offers are accepted for consideration in written form, then they are refused and a year or two later the enterprise buys "advanced" technologies. The Russian market innovative technologies though start to develop actively, but it is still far from the level of a covering of the minimum requirements of Russian market.

The second task is connected with running a business transparently, creating the new management technologies. It would be possible to solve this problem by partnership with technologically developed enterprises. However for foreign partners the risk of the investments loss and an investments output factor is not guaranteed. Very few enterprises managed to solve this task, nevertheless, after analysing Korkunov's experience and the experience of other successful entrepreneurs, we can say that it is a real task.

Development of qualitative and transparent system for management is topical for many enterprises. Creation the self-developing enterprise is based on it. Starting point of creation the management system is personification of
responsibility for decision-making, defining the structure of the centres of responsibility at the enterprise, development the personal financial and complex indicators characterising the operating efficiency of these centres. For each of the last the purposes are determined, plans are constructed, the results are recorded, activities of administrators and the staff are estimated according to controllable costs. As the centre of responsibility is a structural division of the enterprise, which head bears the responsibility for invested material and financial resources, so the problem with a transparency and investments control seems to be solved. It is enough to observe hierarchy of the centres of responsibility. The responsibility centre uses various resources (material, human, financial), receiving the result in the form of products, works or services, which by means of the mechanism of the transfer prices can pass to other centres of responsibility or an external environment of the enterprise.

In real practice of the Russian enterprises often there are divisions with the status of the mixed centre of responsibility which combine characteristic features of two or several classical centres of responsibility. In such cases the system of the activity estimation and differentiation becomes complicated. The other extreme measure is when the responsibility centres are perceived at the enterprise as exclusively financial terms. There are "virtual" centres of responsibility bearing exclusively registration functions. They are created not for management, but for accounting. In this case the functions are logically divided: financial services are engaged in accounting, and the general director deals with management.

3. Conclusions

To avoid such division, the responsibility centre is headed as a rule by the head of division who really manages business processes. The outcome of this business process is estimated by a corresponding financial indicator. Frequently financial indicators should be added by not financial, and the head should have possibility to influence the result, that is to hold responsibility only for relevant costs. In this case, the standard classification of the centres of responsibility becomes transparent and clear, and the necessity to create new types of the centres of responsibility vanishes by itself. This practically excepts the practice when the heads of divisions at the enterprise are responsible for indicators which they cannot manage, and thus important indicators of activity in general remain without control. Such sharing the responsibility leads to psychologically obvious result: if there is no real possibility to manage the process, but responsibility for an indicator is imputed, the head will try to manage the indicator fictitiously, on paper.

4. Discussion

In our opinion, during the crisis period for the enterprises with rather high risk the strategic decision is change to creation the self-developing enterprise. We suggest beginning with constructing a well-organized system of control for operating efficiency of the centres of responsibility. It will form a reliable base for forming-up the self-developing organisation.

Acknowledgements

This work was funded by the subsidy allocated to Kazan Federal University for the project part of the state assignment in the sphere of scientific activities.

References

Bagautdinova N.G., (2013). Territorial marketing as successful strategy for regional development. 3rd Annual International Conferences on Qualitative and Quantitative Economics Research.