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Anticrisis Potential Of Innovative Enterprises (Russia and Germany Case Study)

Alla Podgornaya [a]*, Svetlana Grudina[a], Soviya Avdonina [a]

[a]*Kazan (Volga region) federal university, K.Marks,43, Kazan 420111, Russia*

Abstract

The purpose: To analyse the resources for formation of anticrisis potential of the innovative enterprises In Russia and Germany. Methods: analysis and synthesis methods, and also an abstract-logic method were used when carrying out the research. Results: we revealed the distinctions in the state support for the Russian and German innovative enterprises efficiency aimed at development of anti-recessionary potential, proved the differentiation criteria of the inert and self-developing innovative enterprises, added to the classification of recessionary signals based on their in level of effects to the potential of the enterprise development on the basis of the innovative enterprises external and internal environment recessionary signals analysis, offered the strategy and tactics of anti-recessionary immunity forming. Original Contribution: we enriched the classification of the external and internal recessionary signals, revealed the basic strategy of anti-recessionary potential forming, formulated the factors for creating the innovative enterprise anti-recessionary immunity. The practical significance: the possibility of managing the innovative enterprises crisis developments through tracing the external and internal crisis signals of the enterprise and defining the strategy of the further development is shown.

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Keywords: the innovative enterprise, the state support, anti-recessionary management, signals of crises, anti-recessionary strategy

1. Introduction

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 system wide crisis concerned with a new stage of market economy development. Despite the fact that the great attention now is given to anti-recessionary management, there is a number of pressing questions concerning forming of anti-recessionary potential of the innovative enterprises. In particular, the forming of anti-recessionary immunity, the problem of a choice of

* Alla Podgornaya. Tel.: +7-843-236-83-47
E-mail address: Alla.Podgornaja@kpfu.ru

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anti-recessionary strategy often appears underestimated which leads to necessity of prevention measures. The purpose of this article is to analyze anti-recessionary potential of the innovative enterprises on the basis of Russia's and Germany's experience. The research problems are: revealing of signals of the external and internal environment, determining of effective strategy for development and management of the innovative enterprise, describing of the mechanism of influence of an anti-recessionary spiral, determining the signs of forming the anti-recessionary immunity. To achieve the goal we used analysis and synthesis methods and also the abstract-logical method. As a result of the conducted research we offer and prove the criteria of dividing the innovative enterprises into inert and self-developed, we add the classification of crisis signals basing on the level of influence to the potential of the innovative enterprise development and offer the strategy of anti-recessionary immunity forming. The original contribution and practical significance are overcoming the basic problems of management in the innovative enterprises by choosing the strategy of management on the basis of the added classification of the external and internal environment signals

.2. Methodology

Forming the anti-recessionary potential of the innovative enterprises is caused by a set of factors. And one of important factors of this potential is solving the problem of forming modern economic and "innovative" thinking with the state support. The enterprises in Germany started implementing the innovative processes in 1950 while the distinctive feature of Russia is making the process of innovations introduction more complex and a long enough period of "stagnation". The development model tested after the Second World War in Germany showed that relying on innovative technology developed in different countries, acquiring patents and licences, it is possible to provide 10-20% of annual manufacturing growth. During the last years the essential changes in research and development of Germany happen, federal investments into highly offset applied research and development with a stress on the technologies which are capable to generate new productions and to reconstruct the former are considerably increased. The state and private business cooperation grows stronger. Stimulus for active attraction of private investments into science become more various, including the use of tax credit on research and development, the tax allowance to the accretion to the capital, the enterprise etc. Many federal scientific researches and development works in Germany are conducted by not state organizations due to contracts and grants. Industrial companies perform heavy workload (part of which is applied researches) on contracts under the state supervision. In the field of fundamental researches which are usually financed by the federal government through grant-making, universities dominate. Wide use of contracts and grants is a key aspect in the system of Germany research and development. Due to them the federal government keeps the best research establishments and talented scientists busy, providing them with research and development problems. This makes the system more flexible in comparison with many similar national systems which generally cover the state laboratories and institutes. More than 90 % of federal researchers are supervised by the Ministries of Defense, Health care, Energy, Agriculture and National Science Foundation. The contribution to financing is also brought by the Ministries of Trade, of Home Affairs, Department of Transportation and Environmental Protection Agency. The innovative enterprise support programs show high efficiency, for example, the program named «The founders contest. Innovations in ICT» (the contractor of the project is a company VDI/VDE-Innovation+Technik GmbH) works under the slogan «High technologies is a way to success». It is a leading structure in the field of provision of services for innovative activity and technical decisions, supporting and advising small and medium-sized enterprises on the basis of representation of analytical materials and organizational decisions of both German and foreign clients from political, research, industrial, business and financial spheres; or the ProFIT project which is performed in cooperation with the Economy and technologies Directorate of the Berlin Senate. The program «German Silicon Valley Accelerator» supported by Federal Department of Economic Affairs and technologies of Germany is aimed at assistance to the young enterprises in ICT:

- the contractor of the project - company German Entrepreneurship GmbH - supports small and medium-sized enterprises in craft/trade and also representatives of the in-dependent professions which are engaged in independent research activity, but only those who did not submit patent requests or requests for registration of industrial de-signs within last five years.

Also the transfer of technologies and innovations is developed. For example, the pro-gram SIGNO (inventions patenting support). Assistance to development of key technologies is created. For example, the program for the development means of transportation on electric traction (electro mobility) includes technologies of electric power storage; production technologies; driving technologies.

For today the state support of the Russian innovative enterprises takes a special place in the budget item of expenses. But the gap in production equipment is still dramatic. Moreover, the innovative enterprises bear great risks and are subject to crises. Therefore the effective state support for the stable work of the innovative enterprise is not enough. Let us analyze the innovative enterprises from a perspective of the system approach. The innovative enterprises as systems constantly develop. They are subject to changes, but the changes with a plus as adaptation in the conditions of the uncertainty, which accompanies the enterprise throughout all the life cycle promotes disclosing of innovative and anti-recessionary potentials. Let's notice that we will understand a set of predicted consecutive changes and conditions, and also transitions either in crisis, or in strengthening of anti-recessionary potential as life cycle of the enterprise. On the basis of research of the enterprise life cycle we will formulate the general approach to management of the innovative organization, which is situational anti-recessionary management. Extrapolating tendencies, we will allocate two groups of the innovative enterprises. The base criterion of classification is the capability of the enterprise to react to environment changes. Let's consider the inert, unchangeable systems and self-developing (opened) ones. We can assume that the factories operating with minimum service personnel are inert. The self-developing enterprises can be characterized as "live" that is which develop and change developing anti-recessionary immunity. External and internal environments of the live and machinelike enterprises essentially differ. The object of our research is the self-developing innovative enterprises. The characteristics of environment are dynamics, uncertainty and randomness. The internal environment, being in resonance with external one also undergoes changes and becomes complicated. The competition intensifies and also the risks connected with doing business intensify under the influence of hardly predicted changes of the environment. Tendencies of knowledge half-disintegration swell, knowledge become outdated in 2-3.5 years; they don’t bring competitive advantage any more. The primary goal in these conditions is forming the potential of the enterprise in time. Often by this the potential of the enterprise development is meant but this does not guarantee the forming of anti-recessionary immunity. It is necessary to consider the mechanism which forms the anti-recessionary immunity of the innovative enterprises, which acts to raise the crisis stability and reduces the degree of destructive influence of system and local crises. The synergistic effect of influence of innovative potential and anti-recessionary immunity provides an effective adoption of the new level of development which corresponds to a stage of the life cycle. For example, in Pink's,(2012) work there is a set of examples when achievements become possible only when managers recede from habitual methods and implement new approaches to motivation which correspond to the ideas of modern science. For example, in Google company employees may devote one day in a week to their personal projects, and in Best Buy the employees are allowed to work anywhere and the way they like if only they achieve the goals. Let us study the prerequisites for forming of anti-recessionary immunity. The events proved that a crisis is much easier overcome by enterprises in which any anti-recessionary activity was carried on. An innovative enterprise which could warn or meet crisis is very responsive to requirements of changing environment, thereby winning the next competitive advantages. The competitive advantages of the innovative enterprises also mean the correct choice of strategy and tactics. They can be determined by the degree of capital stock depreciation, worsening dynamics of the working capital flow, a growing share of the borrowed capital, growing resistibility of the personnel to introducing of innovations, a syndrome of professional burning out and also relevant external and internal factors. Depending on the signals which are given by the environment, we will consider the strategy of forming of anti-recessionary immunity of the innovative enterprises. According to Adizes's(2008), theory the organization development consists of two stages which are "growth" and "consenescence". Threats trap the organization during any period and the head should know what steps may be undertaken at occurrence of crisis signals However the given classification not always allows specifying what actually provides those or other troubles. The life cycle theory allows us defining the values more precisely, specifying tasks and features of anti-recessionary management. In our opinion, the most detailed description of the stages of an organization development is given in Miller's,(2000) model. However the given approach does not consider modern features of the environment, concerning innovative enterprises directly. The capability to generation of new knowledge will be criterion of stability for the given enterprises. The signals of environment can be divided into three groups for the convenience of the innovative enterprises management. In the first group of signals threats and possibilities of the external and internal environment are equal, strong and weak points are equal. In the second group threats and possibilities are not equal and in the internal environment there are more strong points than weak. In the third group there are more threats than possibilities, there are more weak points than strong ones.

Table 1. The model for the analysis of crisis signals at an innovative enterprise by A.Podgornaya, S.Grudina, S.Avdonina

Threats= Possibilities	Threats< Possibilities	Threats> Possibilities
The initial stage of life cycle	The life cycle growth stage	The life cycle drop stage
Readiness to implement projects of any complexity	Gaining experience in realization of innovative projects	Choosing the easiest projects for realization
Strong motivation to make an innovative product	Ability to generate an innovative product	From generating to intellectual property protection
High potential of knowledge refreshment	The competition is around new knowledge	Exchange of knowledge specific features
Example: a young consulting company, enterprise (flash-memory inventing by Toshiba)	Example: the way to manage the Amazon company	Example: the experience of «3M» company].

Let's consider the signals of the first group. Here we will refer the negative macroeconomic trends which strengthen uncertainty of successful realization of an innovative product, the unstable market conditions leading to forming of nonobjective understanding the potential demand, unpredictable activities of competitors, difficulties in choosing reference points at entering the market, attracting investments is complicated, growth of information asymmetry. The positive signals are: the activated capital share slowly increases, the potential share is maximum, strong and weaknesses are equal when analyzed. The base which forms the crisis is to be searched in weaknesses of the internal environment of the enterprise. For example, inaccuracy in marketing researches, unjustified overestimation of the costs, partially estimated risk level, downsides of power distribution and others. As an example, the strategies which lead to anti-recessionary immunity forming in case of the given signals can be: licensing and patent protection, accumulating of working capital at the expense of self-financing, use of state orders, joining the major manufacturer and different projects in effect. In case of availability of irresistible competitive advantage it can also be intensive development of a product. The signals of the second group we will call aggression of the environment, bureaucratic barriers in development of business, attempts of copying of a product, the dumping, zero demand, a segmentary competition, sharp growth of the amounts of works, increasing financial flows, quantity indicators exceed qualitative ones at decision-making. Positive signals: an excessive demand, increase in quantity of regular customers, a competition as equals and so on. Environment threats gradually become more and more numerous, there is direct growth of the possibilities, the available reserves are promptly spent. Professional burning out, disbalance in the purposes and values, corruption in authority functions, the threats of creation of competitive companies, who copy innovations, moral or technological depreciation of capacities, system errors can be the crisis sources. As an example, the strategy leading to forming of anti-recessionary immunity in this case can be: production of a unique product, with the raising price, non-standard, simple decisions, capitalization of human potential, trust forming for an exchange of experience and knowledge between employees, effective concentration and distribution of resources, use of tools of aggressive marketing, lobbyism of interests in product promotion. The signals of the third group are difficulties in access to external resources, a capital withdrawal and decrease in competitive advantages. Threats exceed the possibilities, absence of the potential capital, a strong deterioration of actives. The source is a system crisis. A strategy example is targeted crisis management, business minimizing, reorganization, sale of actives of the enterprise. 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.

3. Conclusions

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. In system crisis it would be a mistake to move responsibility to one of managing units as it is a part of a general cycle of the enterprise development and synergetic effect of work of the stuff. The enterprise in a state of crisis demands attention to the elements of systems and subsystems, weak signals due to which creating of the renewed strategy of the enterprise development is possible. Qualitative characteristics

of the internal environment rise. Supervising invasion may be effective on the first, second and fifth phases. On the third and the fourth phases it is ineffective, as these are the phases of the crisis spiral active development, almost unresponsive to control. The crisis can be liquidated only before achieving of a reversal point. The signs of forming of anti-recessionary immunity at this stage are the following: - the crisis is not considered as potential bankruptcy of the enterprise; - crisis makes active all accessible resources and strategies, leading to qualitative transformation of the enterprise; - anti-recessionary management, proceeding from the interests of participants is adaptive, instead of aggressive; - the top management not motivated in falsification of business information, but works on light signals, relying on quality indicators; - accelerated processes make participants active for fast creative actions, constructive recourse, possibility to see ruptures in the internal logic of the enterprise.

4. Discussion

The innovative enterprises have all preconditions for forming of anti-recessionary immunity at synchronization of various components of its development. That is, by controlling the rates of increase of crisis in the basis of a crisis spiral and in active management in the fifth phase. The effective state support will accelerate the given process.

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