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## Crisis management of small and medium businesses in regional economic policy system

### Abstract

The main purpose of the article is to improve management system of small and medium businesses in times of crisis through the formation of a mechanism of cooperation between enterprises and the region in order to ensure the viability of small and medium businesses and to increase the efficiency of regional economic policy. The methods of systemic, crisis, strategic and project analyses, as well as the method of economic modeling and forecasting, were used in the article.

Proposed maturity model of strategic crisis management will make it possible to receive a positive economic effect at enterprises and to maintain the viability that will provide regional economic benefit related to regional economic policy. A conceptual model of a regional project office will make it possible to develop and implement ideas concerning the development of the region in the form of projects through the project office. The model of interaction of the anti-crisis strategy of enterprises and the strategy of regional development will make it possible to obtain a synergistic effect during implementation of anti-crisis projects, as well as the effect of cooperation between the enterprises and the region.

**Keywords:** Crisis Management; Project Approach; Regional Strategy

**JEL Classification:** M18; O18; O20

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### Антикризове управління малим і середнім бізнесом у системі регіональної економічної політики

#### Анотація

Основна мета дослідження полягає у вдосконаленні системи управління малим і середнім бізнесом в умовах кризи шляхом формування механізму взаємодії підприємств і регіону для забезпечення життєздатності малого та середнього бізнесу й підвищення ефективності регіональної економічної політики.

Запропоновані модель зрілості та концептуальна модель регіонального проектного офісу дозволять здійснювати розробку й управління ідеями розвитку регіону в формі проектів, а модель взаємодії антикризової стратегії підприємств і стратегії розвитку регіону забезпечить досягнення регіонального економічного ефекту в межах реалізації регіональної економічної політики.

**Ключові слова:** антикризовий менеджмент; проектний підхід; регіональна стратегія.

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**Антикризисное управление малым и средним бизнесом в системе региональной экономической политики**

**Аннотация.** Основная цель исследования заключается в усовершенствовании системы управления малым и средним бизнесом в условиях кризиса путем формирования механизма взаимодействия предприятий и региона для обеспечения жизнеспособности малого и среднего бизнеса и повышения эффективности региональной экономической политики.

Предложенные модель зрелости и концептуальная модель регионального проектного офиса позволят осуществлять разработку и управление идеями развития региона в форме проектов, а модель взаимодействия антикризисной стратегии предприятий и стратегии развития региона обеспечит достижение регионального экономического эффекта в рамках реализации региональной экономической политики.

**Ключевые слова:** антикризисный менеджмент; проектный подход; региональная стратегия.

**Introduction.** In recent years the number of small businesses in Chernihiv region has increased, namely from 4,712 units in 2010 to 5,835 units in 2013 (93.8% of the total number of enterprises). According to preliminary data, this index amounted to 5,780 units in 2014. In 2013 the number of medium-sized enterprises decreased by 46 units, as compared to 2012, and amounted to 380 units (6.1%). According to preliminary data at the end of 2014 this index also amounted to 380 units. Running small and medium-sized businesses has a social impact on the region due to creation of new workplaces. In 2013 the average number of employed workers amounted to 37.1 thousand people working for small businesses. As a result of the poor socio-political situation in the country, labor market has undergone changes. The number of workers employed at medium-sized enterprises decreased during the period of 2010-2013, namely from 78.8 thousand people in 2010 to 61.6 thousand people at the end of 2013.

Small and medium-sized businesses provide economic benefits to the region in the form of budget receipts. In 2013 local budget revenues from small businesses increased in most districts and towns and amounted to 353.1 million UAH (hryvnias) (22.2% of the total number). The role of medium-sized businesses in the formation of local budget receipts has increased. Total income to the local budget from the medium-sized business amounted to 358.2 million UAH (22.5% of the total number) at the end of 2013 which is more by 102.7 million UAH compared with the year 2012.

Thus, small and medium-sized enterprises provide nearly half of all income to the local budget. Therefore, in times of crisis economy and decentralization the development of enterprises is an important factor in ensuring the viability of the region. It causes the necessity to use modern support systems for small and medium businesses in the conditions of unstable environment.

According to the Regional Small and Medium-sized Enterprises Development Program for 2015-2016, it is necessary to support business in accordance with the following objectives that will help: 1) to adjust regulations; 2) to provide financial, credit and investment support; 3) to ensure resource and information support; 4) to establish business support infrastructure; 5) to increase the quality of administrative services. These objectives should be implemented at the regional level.

**Brief Literature Review.** The problem of small-to-medium enterprise management is described in works of Ukrainian scientists such as I. Mantsurov (2009) [1], T. Berezynko (2012) [2], E. Sakhno (2010) [3], R. Umerov (2012) [4], O. Shubin (2012) [5] etc. However, less attention is paid to the use of small and medium-sized enterprises as a factor of regional economic effect provision. The peculiarities of small and medium businesses management were studied by such scientists as

A. Habiby and D. Coyle (2011) [6], W. Baumol (2004) [7], G. Eliasson and M. Henrekson (2004) [8], D. Isenberg (2010) [9] etc. However, insufficient attention is paid to the use of such modern approaches as synergetic, project, process, etc.

A large number of articles and book editions are dedicated to the problems concerning the creation of a project office. With regard to the regional project office special attention should be paid to I. Osaulenko's work where he suggests to make a regional project management office to run regional project portfolio [10]. At the same time it is suggested that such an office should perform only coordinating functions; questions of initiation of such projects and their support during their implementation are not considered, which does not lead to an integrated project approach. The problem of establishing regional project office work is also described in V. Molokanova's work, but the author's attention is focused on the methods of project portfolio forming, whereas the functions of the project office are not considered [11].

**Purpose.** To improve small-to-medium business management system in times of crisis through the formation of mechanism of cooperation between the enterprises and the region in order to ensure the viability of small and medium-sized businesses and increase the efficiency of regional economic policy.

**Methodology of our research** is based on the systemic, crisis, strategic and project analyses, as well as on principles of economic modeling and forecasting.

**Results and Discussion.** According to the main purpose, our research is based on the following hypotheses.

**Hypothesis 1.** The small and medium-sized businesses crisis management effectiveness depends on the level of modern approaches development and use (management according to «maturity models», synergetic approach, project approach) which should ensure enterprises' viability in times of crisis.

A maturity model of strategic crisis management may contain the following levels: level 1 – a company has no experience of crisis management, there is no methodology; level 2 – a common methodology of crisis management appears; level 3 – the crisis management system completely stands out from the other systems of the enterprise; level 4 – an objective analysis of crisis management procedure is done, all criteria for assessment of the effectiveness of anti-crisis measures implementation are determined; level 5 – the existence of an effective system of enterprise crisis management [12]. The maturity model of strategic crisis management should ensure the transition from the initial to the complete maturity level of crisis and strategic management systems (Figure 1).

The total capacity of the array of mastered knowledge by means of adding up the capacities of mastered knowledge of strategic and crisis management systems can be expressed with the help of the following equation:  $S = S_{ai} + S_{cj}$ .

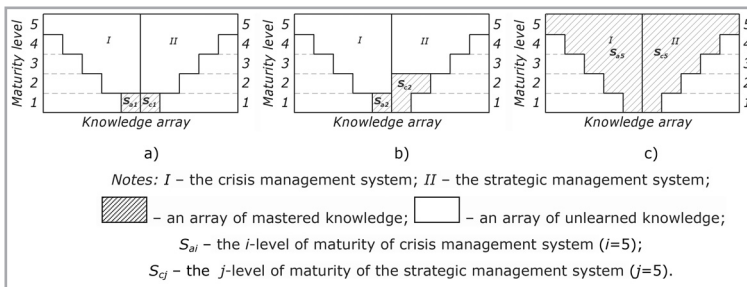


Fig. 1: The scheme indicating the correlation between maturity levels of crisis and strategic management systems:  
 a) – the systems are at the initial level of maturity;  
 b) – the systems are at different levels of maturity;  
 c) – both systems are at the highest level of maturity  
 Source: Compiled by the Authors

A high value of mastered knowledge indicates a high level of maturity and viability of the enterprise. The method of indices calculation is mathematical modeling.

The model can be applied by small and medium-sized enterprises of Chernihiv region to ensure their viability and ability to cope with crisis or prevent it.

**Hypothesis 2.** While managing a region in times of crisis and decentralization, it is necessary to use a project approach that will make it possible to improve the regional management system and increase the efficiency of regional economic policy.

In recent years, certain measures have been taken in Chernihiv region to attract direct foreign investments into the region's economy. Representatives of various international investment funds and institutions as well as representatives of local authorities and commercial structures are invited to investment forums and roundtables. As a result, we observe readiness to finance various sectors of the economy on the one hand, and unpreparedness of our region to attract these funds on the other, because of almost complete lack of professionalism regarding the development of definite projects. Also, the experience of organizations and institutions trying to participate in grant programs on their own indicates the following problems: uncertainty in their own abilities to prepare and implement projects; poor support from public authorities; insufficient informational awareness about new programs of investment funds, etc [13].

Today there are the Department for Economic Development and the Department for Investment Development and Capital Construction in Chernihiv region, which keep records and control of projects implementation in Chernihiv region. Recently such Utility Company as the Center of State-private Partnership was established on the basis of the Department for Investment Development and Capital Construction. It is aimed at searching investment partners for the enterprises of Chernihiv region and supporting projects. Analysis of these departments' activities demonstrates nearly complete absence of professional approach to project management because of the lack of specialists. Therefore, a professional approach can only be applied through attraction of highly qualified specialists.

In order to solve these problems the establishment of a Regional Project Management Office (RPMO) is suggested (Figure 2); its main aim, first of all, will be to form project culture in the region and assist in successful development and implementation of projects in order to ensure rapid development of various economic spheres. RPMO will give its own service, which is very important today, taking into consideration the fact that the project approach does not exist on regional public administration level because of incompetence and underestimation of professional management effectiveness of such projects. Such service means the project support starting from the very beginning (when an idea appears) up to the complete end at the stage of project reports arrangement, which will enable

customers to generate ideas and improve their well-being. Taking into consideration the nature of innovative activity we suggest to form such an office grounding on the competence approach, which is based on specialist's competencies and knowledge.

The level of project management specialists' competence is confirmed by international certificate. According to the structure shown on Figure 2. RPMO will combine functions of the offices marked as «advisor» and «repository». In addition, the office should become the so-called «elder brother» for its customers and develop a relationship of trust.

The effectiveness of this model can be assessed by the success rates of the projects completed at the regional level, through assessment of the level of formed project culture of the region, as well as indicators of economic development of the region.

**Hypothesis 3.** The cooperation mechanism forming between small and medium businesses on the one hand and the regional management system on the other hand will increase efficiency of business strategy realization in times of crisis.

Chernihiv regional system consists of a combination of economic entities, larger part of which is small and medium businesses. A significant part of the regional economic development is guaranteed by revenues from business activity (data are given in hypothesis 1). Therefore, the effectiveness of regional economic policy is predominantly determined by the efficiency of small and medium-sized businesses and influences the enterprises.

Today, in order to improve the system of cooperation between representatives of small-to-medium business and the regional management system, a reformation of local government and decentralization are being conducted in our country. The improvement of regional economic policy in Chernihiv region can be done by means of changing its budget and tax policy; planning, forecasting and programming in the region; use of natural resources and disposal of regional property, etc.

Data concerning indices value of regional economic policy (budget revenues, volume of credits, investments) and indices of small and medium enterprises for 2010-2014 will be received from the Department of Statistics in Chernihiv Region and on the basis of enterprises' reports. Data necessary for the assessment of synergistic effect of the regional businesses will be received on the basis of their analysis. Data analysis methods are the following: mathematical, statistical, financial, software modeling. There are some other methods which can be used. The methods of systematic and morphological analyses, as well as the method of economic analysis for the defining economic efficiency of making such structures taking into account synergetic approach are among them.

*The model of correlation between the anti-crisis strategy of enterprises and the strategy of regional development.* Regional management system consists of management systems for

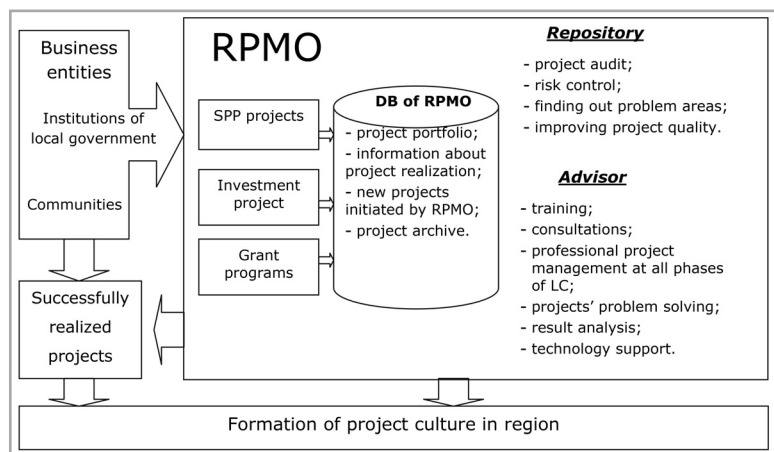


Fig. 2: A conceptual model of regional project office  
 Source: Compiled by the Authors



managing economic entities, the strategy for managing regional influences and the strategy for managing enterprises. On the other hand, the results of economic activity of enterprises determine gross regional product volume, the competitive ability of the region and regional effect in general (Figure 3).

As it can be seen, the future system for managing the region functions according to a certain strategy, determining the general direction of development, normative administrative, financial, investment, resource, information and infrastructural kinds of support and appropriate limits for  $n$ -enterprises (where  $n$  is a number of enterprises in the region).

The effectiveness of anti-crisis strategy implementation (at the completion of the investment project) ( $E$ ) can be calculated on the basis of effectiveness coefficient according to the following formula:  $E=K_p \cdot K_r \cdot K_c$  where  $K_p$  is a coefficient indicating use of money:

$$K_p = G / F = G / \left( \sum_{i=1}^n P_i \cdot B_i \pm \sum_{i=1}^n D_i \cdot B_i \right),$$

where  $G$  is a budget cost of the project;  $F$  is a sum of spent money;  $P_i$ ,  $B_i$  are planned quantity and cost of  $i$ -th resource;  $D_i$  is an amount of saving/over expenditure of  $i$ -th resource;  $n$  is a number of types of resource;  $K_r$  is a quality coefficient:

$$K_r = K_{rp} \cdot K_{rm} = \sum_{j=1}^m H_{jf} / H_{jn} \cdot w_j \cdot \sum_{g=1}^k H_{gf} / H_{gn} \cdot w_g,$$

where  $K_{rp}$  is a quality of a work;  $K_{rm}$  is a quality of a product;  $H_{jf}$ ,  $H_{jn}$  and  $w_j$  are actual, planned value and unit weight of the  $j$ -th parameter of works;  $H_{gf}$ ,  $H_{gn}$  and  $w_g$  are actual, planned value and unit weight of  $g$ -th parameter of a product;  $m$ ,  $k$  are a number of parameters of work or products respectively;  $K_c$  is a coefficient of synergetic effect:

$$K_c = K_{ci} \cdot K_{cz} = \frac{B_{pm} \cdot t_n}{B_{pf} \cdot t_f} = \frac{\sum_{i=1}^n P_i \cdot B_i}{\sum_{i=1}^n P_i \cdot B_i - \sum_{i=1}^n H_{ci} \cdot B_i + \Delta I_{add} \cdot t_n - \Delta t_p - \Delta t_m - \Delta t_o},$$

where  $K_{ci}$ ,  $K_{cz}$  are coefficients of the effect as a result of changing investment requirements and time;  $B_{pm}$ ,  $B_{pf}$  are planned and actual cost of a resource;  $t_n$ ,  $t_f$  are planned and actual time;  $H_{ci}$  is a number of resources transferred from an enterprise;  $\Delta I_{add}$  is additional investments;  $\Delta t_p$ ,  $\Delta t_m$ ,  $\Delta t_o$  are time saving for a project fulfillment, placement of contracts, etc. If  $E \geq 1$  then introduction of anti-crisis strategy is an effective approach.

The assessment of the regional effect will be carried out on the basis of economic analysis of the reporting indices. The model should be used for creation of programs concerning support of business and the development strategy of the region.

It is possible to make appropriate predictive models concerning usage of production potential on the basis of actual performance of the enterprises, with the help of the calculations done by means of special or standard software tools.

**Conclusions:**

1. A maturity model of strategic crisis management will make it possible to receive economic effect at enterprises, to maintain the viability that will provide regional economic benefit concerning regional economic policy.

2. A conceptual model of the regional project office will make it possible to advance and implement ideas concerning the development of the region in the form of projects through the project office, to justify the further development and implementation of RPMO.

3. The model of correlation between the anti-crisis strategy of enterprises and the strategy of regional development will make it possible to obtain a synergistic effect due to realization of anti-crisis projects, as well as the effect of cooperation between the enterprises and the region. This will provide a regional economic effect concerning regional economic policy.

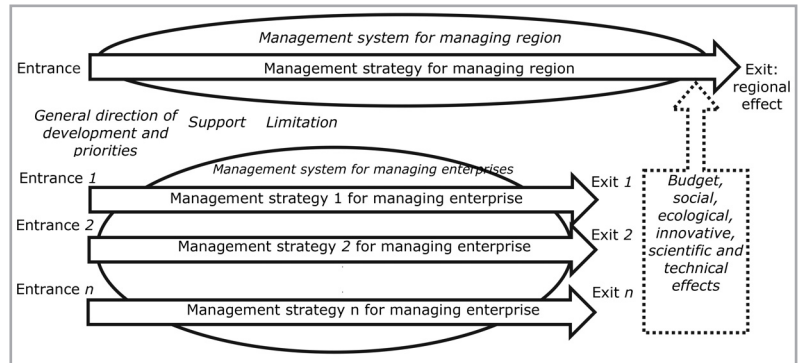


Fig. 3: The correlation between the strategy for managing region and the strategy for managing enterprises  
Source: Compiled by the Authors

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