Assessment of the Dynamic Development of Entrepreneurship in the Cross-Border Areas

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Abstract: The article deals with the assessment of the dynamic development of entrepreneurship. Based on the conducted analysis of scientific works, it is concluded that currently there are no tools that allow for a comprehensive and systematic assessment. In this regard, the purpose of the present research is to develop a methodology for assessing the dynamic development of entrepreneurship which would include methodological and institutional support, assessment areas, and the algorithm of its implementation, as well as to develop recommendations based on the obtained results, taking into account regional specifics. Currently, the Far Eastern Federal District is becoming an area of implementation of many federal investment projects. Special attention is paid by the authorities to the development of cross-border areas. In this article, the authors have tested the proposed method with respect to SMEs registered in the Far Eastern cross-border regions. It was revealed that the Primorye and Khabarovsk territories were the leading regions. Low results were obtained in the Chukotka Autonomous District and the Jewish Autonomous Region.

Keywords: cross-border areas, dynamic development, entrepreneurship, assessment methodology, efficiency, interregional level, parties concerned.

I. INTRODUCTION

A. Relevance

At present, the development of the Far East is a priority task facing the government. The integration of the Asian part of Russia into the developed economic relations is the main condition for the qualitative development of the region and strengthening the positions of the whole country.

In accordance with the legislation, the Far Eastern cross-border areas are the territories of municipal districts of the Far Eastern entities, adjacent to the state border of Russia with the People's Republic of China and Democratic People's Republic of Korea [1].

The main goals in the development of the Far Eastern cross-border areas are:

1. Integrated and sustainable development of the Far Eastern cross-border areas;
2. Providing comfortable conditions for the population’s life and activity in the Far Eastern cross-border areas;
3. Development and retention of competitive advantages over the cross-border territories of neighboring states.

One way to achieve the above goals is to ensure the dynamic development of small and medium-sized entrepreneurship. This sector directly affects the economic condition of the region, as well as the material well-being of society, since its development leads to the emergence of new jobs, replenishment of the federal budget and the budgets of the Russian Federation entities, as well as ensures the competitiveness of the national economy [2].

However, the implementation of targeted measures of state support for the dynamic development of entrepreneurship requires tools that allow for a comprehensive and systematic assessment. In this regard, the purpose of the present research is to develop a methodology for assessing the dynamic development of entrepreneurship which would include methodological and institutional support, assessment areas, and the algorithm of its implementation, as well as to develop recommendations based on the results obtained, taking into account regional specifics.

B. Scientific Importance

Currently, there is a wide variety of authors, who point to one or another aspect of the regional development due to their status of cross-border areas.

Panarina D.S. notes the great importance of the border and the frontier as a factor in the development of the region, simultaneously extending these concepts and informing about the need to approach the problem systematically, taking into account the broad range of influence of the border and the frontier on economic indicators and people's consciousness [3].

Osmolovskaya L.G. also recognizes the importance of borders in the development of cross-border regions dividing the concept of geographical boundaries into natural boundaries and those established by man, similarly as is noted by P.Ya. Baklanov. This division, as well as a generally meaningful and integrated approach to the study, helps to achieve the objectives aimed at management of territories [4].

Baklanov P.Ya., in his article concludes about different approaches to the study of the cross-border and transborder territories, regions, and their development potentials. Namely, the author highlights the historical, economic, geographical, and geopolitical approaches. Baklanov suggests using a comprehensive, interdisciplinary analysis of the potential for the development of the cross-border areas using a combination of these approaches [5].

Seferova N.A. defines the frontier position of the region as a significant resource for regional development. The author also sets the main tasks of cross-border cooperation, concluding that it is mutual support and good-neighborly relations between the states whose cross-border territories are in contact, that are a key factor in the development of not only a single cross-border region, but also the country in general [6].

Chekryzhov A.V. mentions a number of problems of the cross-border areas of the Russian Federation and proposes measures to eliminate them, including those to combat the depression of the region in general. According to
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Chekryzhov, first of all, it is necessary to consider the presence of cross-border areas in the region as a competitive advantage, and then competence use this preference. To do this, the author proposes to highlight a certain legal and juridical status of the cross-border regions, consider the opportunity for reduced tax rates for entrepreneurs, and develop transport infrastructure, namely road and rail communications. In this regard, the problem of cross-border development requires a systematic approach, which, with the support of the Federation, will help to solve not only economic failures but also to bring entire regions out of the depressed state [7].

Arsentyeva I. L. and A.N. Mikhaylenko came to the conclusion about the need for a new conceptual and practical approach to the relationship between the barrier and contract functions of the border, and, as a consequence, the introduction of a new smart border. Such a border will combine both hard barrier functions and soft contact functions. It is this state of the border, together with proper integrated management, financial support, regulatory framework and political willpower that will bring all this to life, and allow qualitative development not only of the cross-border areas and the entire region but also of the country [8].

Tsvetkova O.V. gives recommendations for the development of cross-border regions, namely, the formation of a single information portal for the development of cross-border cooperation, which will facilitate communication between the entities of cross-border or transborder cooperation. Also, the increase in the cross-border area and the technical equipment of the frontiers will facilitate more free movement of investors and localization of productions in the cross-border areas, as well as the introduction of tax concession that will contribute to the implementation of joint projects of small and medium-sized enterprises (SMEs) [9].

As for the entrepreneurship development in the cross-border areas, in particular, small and medium-sized businesses, V.E. Tsarev and D.A. Vershina point to the shortcomings of state support in this area. They note various mechanisms that can help to resolve this shortcoming in the current situation in the Russian Federation, including in the Far East [10].

Golobokov A.S., I. A. Budnikov, and K.S. Ammosova analyze the situation with small businesses in Primorye Territory, noting the special importance of this entrepreneurship for the country in general, as well as provide statistical indicators. Despite the upward trend of indicators, the authors note the need to improve the business environment that will allow the business to fulfill its potential, implementing new projects and attracting highly qualified specialists to the region [11].

Shumik E.G. and E.A. Starchenko characterized state programs to support SMEs in Primorye Territory, as well as identify the main reasons for the inefficiency of existing state support. It was proposed to implement a risk accounting system and investment project examination that, according to the authors, would improve the investment mechanism applicable in relation to SMEs in Primorye Territory [12].

Exploring the development history of the Far East and the attitude of the federal authorities to this region, E.K. Pililyan notes about the need for high-quality state support. The author came to the conclusion that it was possible to successfully achieve strategic objectives only in case if the state performed its functions to create mechanisms aimed at initiating the business activity in the region [13].

Artemova O.N. notes that one of the main priorities of state support for entrepreneurship should be the development of state institutions. It is necessary to pay attention to improving the quality of public administration. At the same time, it is definitely necessary to take into account the specifics of the region [14].

The above mentioned makes it necessary to ensure the dynamic development of entrepreneurship. Thus, E.G. Revkova [15], in her work, indicates that dynamic development is necessary to adapt the system of entrepreneurship to changing conditions. Her approach is complemented by the work of E.M. Azaryan and R.V. Kuzmenko, who indicate the need to synchronize the interests of all participants to ensure dynamic development [16].

The authors suggest various methods to assess the effectiveness of business development. Thus a number of authors propose to focus on statistical indicators and their dynamics, as well as considering both the indicators in general and structuring data in various ways.

According to the authors of the present study, this approach does not allow assessing the entrepreneurship in terms of its dynamic development.

In this regard, the authors have considered approaches aimed at the development of integrated indicators using various methods. Since entrepreneurship is an economic system characterized by a multifaceted development process, the developed methodology should also include an assessment from the perspective of participants involved in the entrepreneurship development, as well as take into account the economic, social, financial, and budgetary results of SMEs manifested in the long term. The use of this technique will, in turn, offer promising measures necessary to ensure the dynamic development of entrepreneurship both at the regional and state level.

II. METHODS

A. General Description

In the course of implementing the set tasks, the number of methods mutually complementing each other were used. The categorical method, logical-structural analysis, and synthesis were used in the analysis of theoretical statements of the dynamic development of entrepreneurship. General scientific research methods, as well as applied economic and statistical methods were used in the development of the methodology for assessing the dynamic development of entrepreneurship. When testing the proposed methodology, a set of empirical methods were used, which included content analysis, comparative analysis, graphical modeling, algorithmization, and ranking.

Figure 1 presents the methodology developed by the authors to assess the dynamic development of entrepreneurship.
B. Algorithm

The methodology for assessing the dynamic development of entrepreneurship consists of several blocks.

**Assessment purpose**
- Comprehensive, systematic, interregional analysis of the dynamic development of entrepreneurship
- Provision of information on the business development status to the authorities at all levels, the population, and business structures
- Exchange of information obtained in the course of assessment with analytical centers, and rating agencies of the organization

**Organizational elements of the assessment**
- Subjects of the assessment
- Object of the assessment
- Methodological support of the assessment
- Institutional support of the assessment

**Areas of assessment**
- Regional
  - Static assessment
- Interregional
  - Dynamic assessment

**Assessment algorithm**
- Entrepreneurial effectiveness
- Budget effectiveness
- Public effectiveness
- Investment effectiveness

**User of the assessment results**
- State and local government bodies
- Nonprofit organizations, population
- Business entities, associations

**Fig. 1: Methodology for assessing the dynamic development of entrepreneurship**

The first block includes the tasks of conducting the assessment, namely, comprehensive, systematic, interregional analysis of the dynamic development of entrepreneurship by means of the proposed indicators; provision of information on the development state of entrepreneurship to the population and business structures by authorities at all levels; exchange of information obtained in the course of assessment process with analytical centers, rating agencies, and organizations.

The second block consists of methodological and institutional support, which contain legislative acts, methodological documents, program documents of the federal and regional levels in the field of business development; assessment object and subject, which are enterprises in accordance with the criteria related to the sector of SMEs.

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The main directions of the methodology for assessing the dynamic development of entrepreneurship, presented in the third block, are statistical and dynamic analysis carried out at the regional and interregional levels.

The fourth block includes assessment of the constituent indicators of each type of effectiveness, integral indices of individual types of effectiveness, and general integral index of effectiveness.

In the framework of the present study, the authors propose the following types of effectiveness:
- entrepreneurial effectiveness which characterizes the cyclical changes in market conditions, the level of training and qualification of the workforce;
- budget effectiveness reflecting the sources of budgetary funds for the further development of the territories;
- social effectiveness, characterizing the social climate in the region and the attitude of the local population to entrepreneurship;
- investment effectiveness, reflecting the return on investment in the modernization of production, the growth of entrepreneurial potential, and the creation of an investment climate in the region.

Further, the interpretation of the results obtained is carried out, as well as factoring features affecting the development of
entrepreneurship, and depending on them, the development of specific directions to improve the efficiency of entrepreneurship.

The assessment should be carried out from the standpoint of the participants involved in the development of entrepreneurship, represented in the last block, and take into account the economic, social, financial, and budgetary results of small and medium-sized enterprises, manifested in the long term.

### III. RESULT ANALYSIS

In order to test the proposed method, in this article, SMEs registered in the cross-border areas of the Far Eastern Federal District (FEFD) are considered as the research object. The regions of the Russian Federation within the FEFD, located in the territory of the Far Eastern cross-border areas, are the Primorye and Khabarovsk territories, the Amur Region, and the Jewish Autonomous Region [17].

One of the economic and geographical features of the FEFD is the periphery of its territory, the concentration of the economy in the two largest cities, and the socio-economic polarization between these centers. The economy of the FEFD is characterized by a number of structural features and is largely based on the use of natural resource potential. The export of natural resources and the development of transport and transit functions are considered a strategic development line of the FEFD in the future. At the same time, the dynamics of the gross regional product are determined by the growth of retail trade turnover and production of services, while the pace of industrial growth is lagging behind.

The system of indicators underlying the assessment is presented in Fig. 2.

![Fig. 2: The system of indicators to assess the dynamic development of entrepreneurship.](image)

To construct integral indicators, the calculation of weight coefficients was performed [18] and the indicators were normalized. In order to determine the weight coefficients [19], an expert method was used. To implement expert methods of decision-making, appropriately qualified specialists were involved. When ranking performance indicators, it is advisable to take into account the opinion of specialists who are directly faced in practice with the studied problems.

Figure 3 presents the integral indices of entrepreneurial effectiveness of cross-border regions.
Thus, during the study period, the following regularity can be identified: the profitability ratios of sales and production were characterized by a tendency to increase in all regions of the FEFD in 2011-2013, while in 2014, a negative trend was recorded. The same trend was typical of labor productivity. This may be due to the impact of the financial and economic crisis that emerged in 2014. At the end of the study period, the regional values are stabilizing.

In general, the Primorye and Khabarovsk territories have shown the best results in 2011-2018 in terms of the integrated index of entrepreneurial development effectiveness that was due to the implementation of federal projects on the creation of industry clusters and priority development areas. The Chukotka Autonomous District and the Jewish Autonomous Region were the least effective in terms of unstable development dynamics of entrepreneurship.

Figure 4 shows the integral indices of the budget efficiency of the regions.

Analyzing the results of the assessment of the budgetary effectiveness of entrepreneurship development in the cross-border regions of the FEFD, one can state the deterioration of the overall picture in the ratio of budget revenues and the amount of state support, since in some entities the values of indicators are reduced several times. The same is true for the ratio of changes in value-added in entrepreneurship to the cost of supporting it. This fact indicates the instability in the entrepreneurial environment and the lack of clear programs for entrepreneurship financing, in accordance with which fixed amounts of state support should be allocated. Indicators of value-added and budget revenues from entrepreneurial activity change slightly from year to year, therefore, corrective measures are required with respect to state financing of entrepreneurship. The ratio of the number of new jobs to the cost of the budget to create them either was increasing or remaining at the same level that was a positive trend.

During the study period, the Primorye and Khabarovsk territories demonstrated the best results in terms of budget development effectiveness. The remaining regions were characterized by a relatively average level of effectiveness. However, all regions were characterized by unstable dynamics during the study period. This is due to significant changes in the state tax policy, as well as in providing support...
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to the entrepreneurial sector. Therefore, for deeper and objective assessment of the entrepreneurial development effectiveness, it is necessary to conduct a trend analysis for each region for a longer period.

Figure 5 shows the integrated index of the social effectiveness of the regions.

Based on the obtained results, a positive trend can be noted as an increase in employment in the business sector: the ratio of the number of employees in SMEs to the total number of the economically active population in the regions increased during 2014-2018. The dynamics of the ratio of the average monthly income of employees engaged in SMEs to the cost of consumer basket were increasing up to 2013, while in 2014 this indicator fell on the background of the crisis and rising prices. Over the past few years, the dynamics of this indicator have stabilized.

The funds allocated by SMEs for the implementation of social projects and programs were also significantly lower in 2015-2018 compared to a steady increase in 2011-2014. Consequently, business entities reduce their expenditure items by excluding social programs and projects during economic crisis periods.

Thus, in 2011-2018, the Primorye and Khabarovsk territories were the leaders in terms of social effectiveness. The Chukotka Autonomous District and the Jewish Autonomous Region were characterized by low effectiveness. At the same time, during the analyzed period, a stable picture was also observed for this type of effectiveness, since fluctuations in integral indices and ratings were insignificant. Therefore, the measures developed to maintain a favorable situation in business activity as well as to minimize the adverse impact of negative factors will be guaranteed to be effective and their result will be easily predictable.

Figure 6 shows the integrated indices of the investment effectiveness of the regions.

Based on the presented diagram, the following conclusions can be drawn. The return on investment did not show any pronounced trend. In some regions, the peak was noted in different years. Therefore, the amount of investment in the entrepreneurial sector of the economy is difficult to predict, and count on this type of financing is impractical. The ratio of the amount of attracted private investments to the amount of state support is characterized by sharp fluctuations. This indicates the instability in the entrepreneurial environment and the need for measures at the state level to create a favorable investment climate and state support for small and medium-sized businesses.
Funding for training the population in the basics of entrepreneurship in a number of regions was not carried out or was conducted not every year. The exception was the Khabarovsk Territory, in which funds were allocated consistently every year during the study period.

In turn, the investment effectiveness of entrepreneurial development is largely due to regional policy, favorable investment climate, as well as the presence of federal projects and the degree of their implementation [20-22]. The most positive trend was observed in regions such as Primorye and Khabarovsk territories. Low results were observed in the Chukotka Autonomous District and the Jewish Autonomous Region.

Thus, the conducted assessment of the dynamic development of entrepreneurship indicates the predominance of negative trends in the development of entrepreneurship in the cross-border areas of the FEFD. To increase the level of effectiveness of entrepreneurial development, it is necessary to develop promising areas, including the following principles: removal of conflicts of interest of parties concerned, balancing of interests, and consolidation of resources.

IV. DISCUSSION

After testing the proposed methodology, it can be concluded that the use of this approach allows disseminating the results to parties concerned, and thus taking the most effective measures aimed at improving specific indicators that allow more efficient use of available resources.

It should be noted that performance indicators should be considered differentiating them with respect to different aspects, which was proposed by the authors earlier. The researchers considered dividing the assessment into resource and investment components, as well as the component of state support for entrepreneurship [23]. The current approach assesses the development of entrepreneurship through financial support and pays more attention to consideration of the interests and expenses of the state that, in general, corresponds to the above-considered investment efficiency.


At the same time, the authors do not fully consider the issues of social effectiveness and the interests of different groups of stakeholders in their development [25, 26].

Thus, the conducted theoretical analysis made it possible to draw the following conclusion. The need to develop cross-border areas is currently a priority task for the state. At that, entrepreneurship can be one driving factor for development. Since small and medium-sized entrepreneurship is an instrument to improve the regional economy and the social climate, as well as solving problems of a political nature, it is characterized by specific economic features and peculiarities due to territorial specificity. The development of entrepreneurship is synergistic in nature, being a link between the state and human resources.

V. CONCLUSION

The article analyzed the existing approaches to assessing the dynamic development of entrepreneurship. The results obtained have allowed the authors to draw the conclusion that it is necessary to develop a methodology that would include an assessment from the perspective of participants involved in the development of entrepreneurship, as well as would take into account the economic, social, financial, and budgetary results of SMEs manifested in the long term. The use of this technique will, in turn, offer promising measures necessary to ensure the dynamic development of entrepreneurship both at the regional and state level.

The proposed methodology for assessing the dynamic development of entrepreneurship was tested with respect to SMEs registered in the cross-border regions of the FEFD. In consequence of the conducted assessment, the Primorye and Khabarovsk territories were noted as leading regions. The Chukotka Autonomous District and the Jewish Autonomous Region have shown quite low results.

According to the authors, in addition to the methodology, it is necessary to create an information center to support cross-border entrepreneurs of the FEFD. This Center will have to accumulate information flows emanating from domestic and foreign entrepreneurs, as well as establish communication between them. The Center will be able to implement the interaction mechanism and offer programs for more successful functioning in order to achieve the set goals, and develop effective business management models for different industries in each region, taking into account regional specifics.

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