

Strategy for the development of small and medium-sized businesses in the ecosystem of the region

Igor V. Mandritsa (0000-0001-9911-1584)^{1,2 (1)}, **Olga V. Mandritsa** (0000-0002-0364-1239)², **Anna A. Babich** (0000-0001-8033-3654)³, **Elena A. Drannikova** (0000-0002-5677-2187)⁴

¹ North Caucasian Federal University, Institute of digital development, Department of organization and technologies defense of information, Stavropol, Russia

² MIREA - Russian Technological University, Branch in Stavropol, Faculty of Regional Economics, Stavropol, Russia

³ North Caucasian Federal University, Institute of Economics and Management, Department of Economic Security and Audit, Stavropol, Russia

⁴ MIREA - Russian Technological University, Branch in Stavropol, Faculty of Regional Development, Stavropol, Russia

Abstract. In times of crisis there is a need to incorporate management mechanisms that allow strategic use of the region's ecosystem and entrepreneurship potential. Today many entrepreneurship agents carry out business processes chaotically, traditionally managing their resources without considering the innovational components of the ecosystem. There is a need for a strategy created on the basis of achievements and development of scientific theories, which will align the spontaneous chaotic nature of the entrepreneurial cluster and strengthen its vector impulse in increasing the activity of the economy of the territory. The aim of the study is to create a modern strategy for the development of small and medium business on the basis of the study and development of scientific theories and ideas, to create the strategy to study the state and trends of entrepreneurial activity of the region and its ecological environment. Methods: management theory, strategic management theory, systems analysis, methodologies of SMB growth poles strategy in regional systems, development of regional ecosystems, conceptual approaches to entrepreneurship development strategy, concepts, and models of entrepreneurship ecosystem theory. Results and novelty: The strategy of small and medium business in the region proposed in the work is based on the study of theories, methods and analysis of the role and performance trends of small and medium business (SMB), which determined its priority as a propulsive cluster of the regional economic system. The application of platform strategy for SMB development allows increasing the propulsiveness of the SMB cluster in the ecosystem of the region.

Keywords: Small and medium-sized businesses, Innovative development, Digital ecosystem.

1. Introduction

¹ Corresponding author: imandritsa@ncfu.ru

The regional economies of Russia require modern ecosystem development strategies to enhance the entrepreneurial activity of the region, which can become one of the priorities of government policy. Development of the strategy is provided by deep theoretical research of methods and results of analysis of statistical data of Stavropol Territory. The aim of the research conducted by the authors is to develop a methodology of small and medium business strategy taking into account its condition and tendencies of entrepreneurial activity in the region's ecological environment.

2. Materials and Methods

The research is based on methods of management theory, methodology of strategy of SMB growth poles in regional systems, development of regional ecosystems.

The authors build upon the foundations of Schumpeter's theory of entrepreneurship. Later on the impact of entrepreneurship on the level of development of territories and the growth of entrepreneurial potential on the basis of productivity (Galnykina et al., 2021) are substantiated. The analysis of entrepreneurial activity of territories was used as a tool to assess the institutional factor of economic systems development (Karatysh, 2019).

The theory of strategizing by Kvint V.L. (Kvint, 2015), finds continuation in the methodology of regional strategizing (Kozyrev, 2020). There is a need to apply the methodology of propulsive development of regional sectors, the theory of cluster economy, and innovation systems.

Concepts and models of the theory of digital ecosystems of entrepreneurship, of digital marketing and inter-business relations have been developed in the works of foreign scientists (Koskela-Huotari et al., 2016), (Bresciani et al., 2021), (Pooya et al., 2021), (Hofaker et al., 2020). Theories of entrepreneurial innovation ecosystem are presented in the works of domestic scientists (Vikulina and Votchel, 2021), (Solodilova et al., (2021), (Zemtsov and Baburin, 2019). The ability of the ecosystem to increase revenues from innovation initiatives is substantiated (Marshall et al., 2020).

The theory of strategic management on the formation of SMB business environment in the ecosystem of the region requires further development considering the ongoing evolutionary changes in the environment and the creation of new innovation mechanisms.

3. Results

It is necessary to consider the trends of entrepreneurial activity in the region to work out a modern strategy for the development of small and medium-sized businesses. The results of the analysis of entrepreneurial activity of the Stavropol Territory can be traced by the criterion of revenue generation (turnover) by SMB agents in the turnover of all organizations of the region for the period from 2015 to 2020 according to the North Caucasusstat (Table 1).

Table 1. Evaluation of SMB performance in Stavropol Territory. *Source:* (Department of the Federal State Statistics Service for the North Caucasus Federal District, 2022).

Indicators	2015	2016	2017	2018	2019	2020	Deviat.
SMB turnover, million rubles.	441 189	504 423	595 828	465 803	459 729	438 286	-2 903
Turnover of regional organizations, million rubles.	1 162 388	1 297 318	1 347 100	1 605 000	1 508 600	1 144 717	-17 671
Share of SMB in the turnover of regional enterprises, %	38	39	44	29	30	38	0

The share of SMB in total turnover of regional organizations is between 29-44%. The maximum value of 44% was reached in 2017. In the following years the SMB turnover decreases. In 2020, despite this,

the share of SMB turnover is at the level of 38% due to less rapid decrease in comparison with the dynamics of all organizations of the Territory. It should also be emphasized that crisis was strengthening in this period, but its impact not only did not destroy, but continued strengthening entrepreneurial activity within the range. This reflects the objective processes of market regulation of business, which identified SMBs as a regional cluster of institutional environment, providing up to 40% or more of the economic development of the region.

The starting points of the organization of the cluster strategy and formation of the institutional environment of the region are presented in the cluster theory of V. A. Sherin (Sherin, 2016), the theory of growth poles, which have approbation and have already proved their effectiveness. The application of these methodologies makes it possible to determine the points of growth of regional sectors as a priority basis for economic development.

It is required to take the results of the analysis of entrepreneurial activity of the territory on the basis of productivity indicators and identify those SMB sectors that provide higher activity to apply these methodologies and theories to the real conditions of the region (Demianenko, 2021).

The result of revenue generation by one employee of SMBs of the region by the most productive six types of activities is shown in Figure 1.

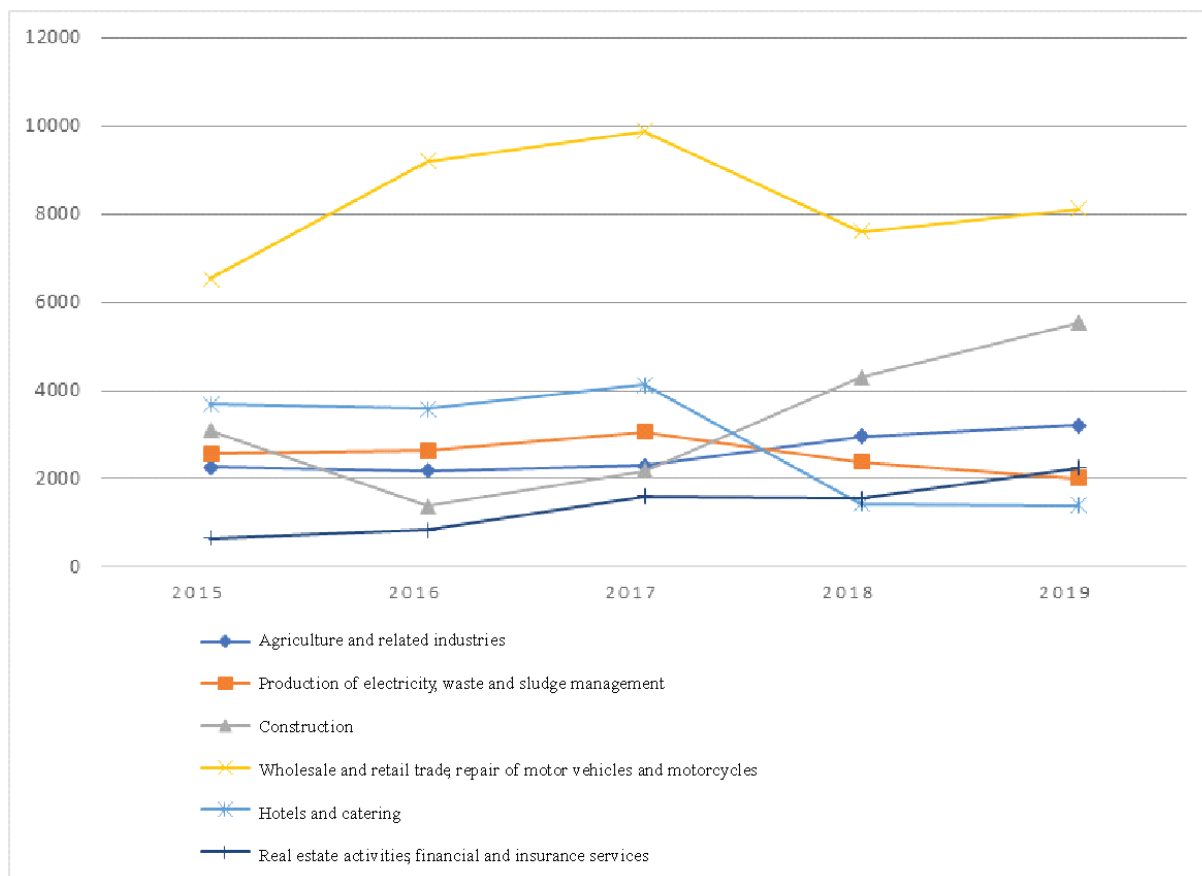


Fig. 1. Changes of revenue generation per employee by the SMB activities in Stavropol Territory.

Source: Compiled by the authors.

The main growth factor in terms of revenue generation is represented by SMBs in the field of wholesale and retail trade, repair of motor vehicles (8125.5 million rubles in 2019). The role of this sphere is difficult to overestimate, but the development of the territory endowed with certain basic resources requires their primary use. The contribution to the organization of the regional cluster of the

institutional environment of SMBs could be made by those sectors of the region that are able to create a large share of added value based on the use of the portfolio of basic resources of the territory in interaction with the innovative, educational, public and managerial ecosystem of the region. In the North Caucasian Federal District and in the South of Russia the formation of SMB development strategy should be linked to the organization of a regional cluster of institutional environments of agro-industrial direction, construction, tourism, IT-technology, renewable energy and unique innovation areas. However, as the analysis showed many of them are characterized by a lower level of revenue per employee per year in comparison with trade. At the same time, in some areas of SMBs activity in Stavropol Territory there was a significant increase in productivity in 2016-2017: in construction to 5544.1 million rubles, in agriculture and related industries to 3217.2 million rubles, in real estate, financial and insurance services to 2249.3 million rubles. At the same time, there is a decline in productivity in the activities of hotels and catering, and the production of electricity.

These trends are characterized to a greater extent by a set of casual relationships of the business community, insufficient use of progressive elements of the region’s ecosystem. Nevertheless, the objective processes, the spontaneous market environment of SMBs and the contribution made to their development by the state-management ecosystem of the region are able to ensure the maintenance of SMBs as the institutional environment of the region. This is confirmed by the trends of labor productivity forecasts of SMBs of Stavropol Territory, which are able to create a greater amount of value added by using the basic resource of the territory per employee, which is represented by the polynomial trend in Figure 2.

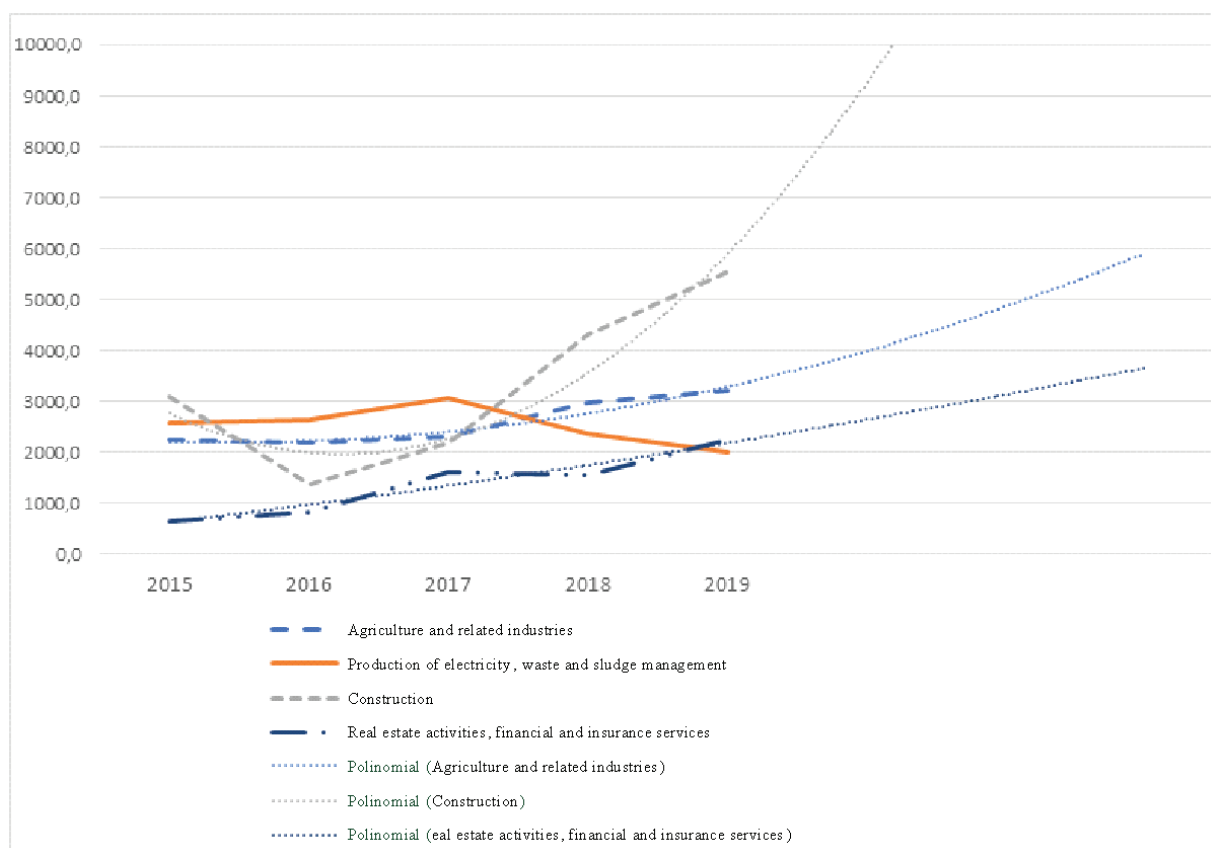


Fig. 2. Polynomial trends in labor productivity of SMBs in Stavropol Territory. *Source:* Compiled by the authors.

The growing trends in the revenue generation of SMBs in Stavropol Territory are shown by “Construction” and “Agriculture”. Higher levels are characteristic of innovation and investment

industrial production, endowed with progressive innovative technologies of production, management and interaction with business environment. The development of industrial production in the territories of the South of Russia is very conditional because of the need to preserve the unique ecosystem of resort areas, which requires applying additional new knowledge to form a modern development strategy.

4. Discussion

The authors see the simultaneous interaction of a set of elements of the region's ecosystem and the ecosystem of innovation, taking into account the evolutionary changes occurring in them, as the basis for the formation of the concept of a qualitatively new level strategy for the development of SMBs in the region.

Ideally, the strategy of interaction of the SMB cluster with such elements of the ecosystem of the region as innovative and educational, state and administrative, financial and credit ones can create propulsiveness of the territory in the form of peculiar growth poles to the industries, the presence of other factors of advanced growth of economic clusters which give impulse to its sustainable development.

Generation of new knowledge and advanced technologies finds its realization in the economic activity of the region's enterprises. In 2018, the total volume of shipped innovative goods was 39,132,303.8, thousand rubles, or 54.4%, including 38.9% of goods in the research sphere, 11.8% – industrial production, 2.7% – telecommunications, 0.9% – architecture and engineering design, technical tests, as presented in the statistical collections of Rosstat.

The Stavropol Territory is at the forefront in the North Caucasian Federal District in terms of applications for registration of patents for inventions and utility models. Moreover, the region has seen an increase in the use of advanced production technologies (Ivanova et al., 2021). Thus, the state of the Stavropol Territory ecosystem testifies to the presence of basic conditions necessary for the formation of the strategy of small and medium business development of a qualitatively new level, based on the combination of joint evolution of meso- and micro-level systems, concentration of SMB's capabilities around innovations.

The authors offer the strategy in the form of organization of entrepreneurial community system of the closed type (figure 3).

The four-component composition of SMB development strategy presented in Figure 3 consists of segments: communication (promotion), product, distribution, innovative ecological environment. The way to implement the strategy is to create a digital profile of all SMBs and innovation environment of the territory, which can be proposed for implementation at the regional site in the Stavropol Territory. The interest in this is related to the course of the state policy aimed at the innovation and digital development of the economy of the country and the regions.

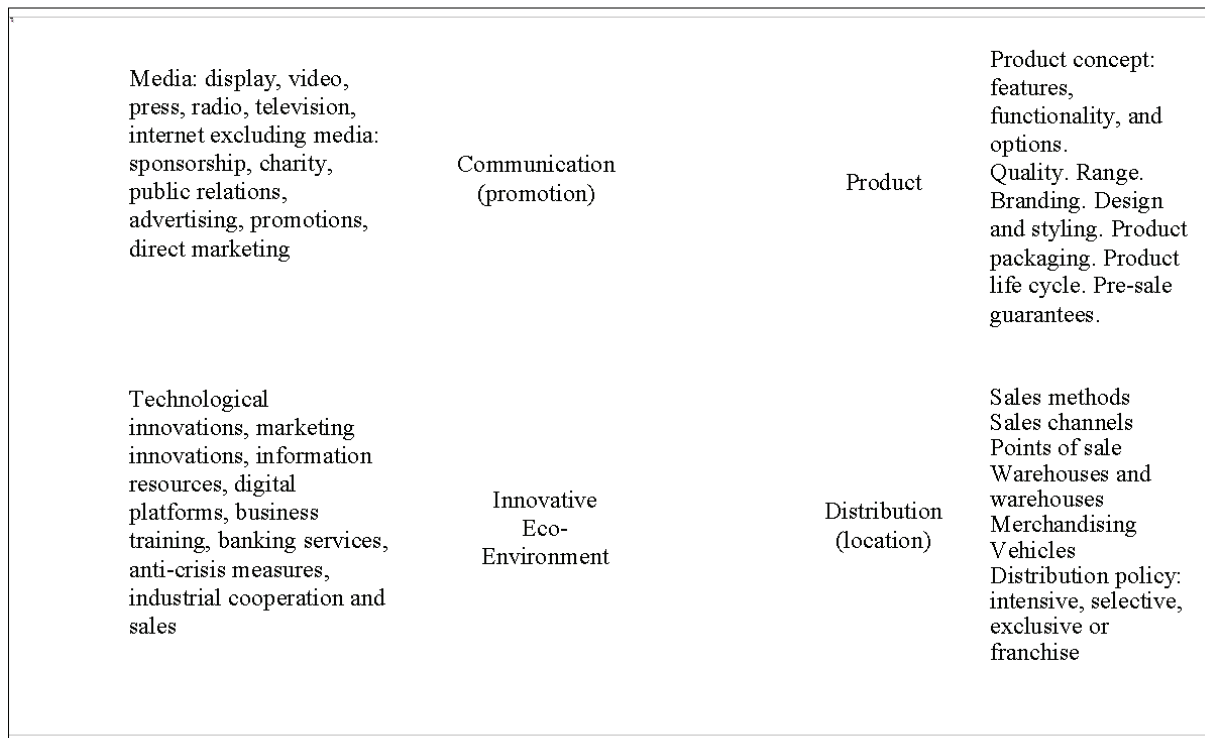


Fig. 3. Components of SMB development strategy in the region. *Source:* Compiled by the authors.

Thus, the main modern difference between the proposed strategy and the traditional ones is that the creation of an environment for information and technical impact of SMB agents occurs with the use of digitalization by creating a digital profile of each entrepreneur, grouped in the context of the components discussed above. The tool to implement the strategy can be the already developed digital platform beta version <https://mcp.pф/>, which is still in the testing phase, needs to be finalized, clarified by the entrepreneurial and scientific community, and can be supplemented considering the recommendations given by the authors on the organization of the platform strategy.

5. Conclusion

Thus, the strategy of development of small and medium businesses in the ecosystem of the region, considered by the authors, is presented in the form of a platform strategy within four components: communication (promotion), product, distribution, innovative ecological environment. Accordingly, it will modernize, expand, and accelerate the possibilities of management decisions of the subjects of the entrepreneurial environment of the Stavropol Territory and apply it further as a combinatorial set of digital factors (metadata).

Behind each service of the platform strategy is a request from business representatives to optimize their business activities. Thanks to the digitization of many metadata from the profile of each platform participant, business processes are simplified and accelerated, interaction on the four components of the strategy is established, which gives additional impetus to the entrepreneurial cluster and the territory.

References

1. V.V. Vikulina, L.M. Votchel, Econ. Entrepr. **2(127)**, 800-803 (2021). <https://doi.org/10.34925/EIP.2021.127.2.157>

2. A.E. Galnykina, J.R. Meshkova, S.I. Shanygin, *Econ. Law. Innov.* **1**, 55-66 (2021). <https://doi.org/10.17586/2713-1874-2021-1-55-66>
3. A.E. Demianenko (ed.), *Materialy V Mezhdunarodnaya nauchno-prakticheskaya konferentsiya: Ekonomika, politika, pravo: aktualnye problemy, tendentsii i perspektivy razvitiya* [Proc. V International Scientific-Practical Conference: Economics, politics, law: current issues, trends and prospects of development] (Science and Education, Penza 2021)
4. S.P. Zemtsov, V.L. Baburin, *Reg. Stud.* **2(64)**, 4-14 (2019). <https://doi.org/10.5922/1994-5280-2019-2-1>
5. M.G. Ivanova, A.V. Aleksandrova, M.Y. Anikeeva, Y.D. Aleksandrov, A.S. Evstratova, Y. V. Zavgorodnyaya, T.M. Vasilyeva, *Analiticheskie issledovaniya sfery intellektualnoi sobstvennosti 2020: koeffitsient izobretatelskoi aktivnosti v regionakh Rossiiskoi Federatsii* [Analytical studies of the intellectual property sphere 2020: coefficient of inventive activity in the regions of the Russian Federation] (Federal Institute of Industrial Property, Moscow, 2021). Accessed on: November 01, 2022. [Online]. Available: <https://fips.ru/about/deyatelnost/sotrudnichestvo-s-regionami-rossii/koeff-iz-akt-2020.pdf>
6. V.E. Karatysh, *Sust. Dev. Econ.* **1(37)**, 150-155 (2019)
7. V.L. Kvint, *Manag. Consult.* **7(79)**, 6-11 (2015)
8. A.A. Kozyrev, *Econ. Industry* **13(4)**, 434-447 (2020). <https://doi.org/10.17073/2072-1634-2020-434-447>
9. N. Solodilova, R. Malikov, K. Grishin, *Soc. Econ.* **1**, 22-24 (2021). <https://doi.org/10.31857/S020736760013387-4>
10. V.A. Sherin, *Rus. Econ. Online J.* **1**, 34 (2016). Accessed on: November 01, 2022. [Online]. Available: <http://www.e-rej.ru/upload/iblock/03e/03e28e0985014904550703ccca22cf47.pdf>
11. S. Bresciani, A. Ferraris, M. Romano, G. Santoro, *Digital Ecosystems*, in *Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World* 153-165 (Emerald Publishing Limited, Bingley, 2021). <https://doi.org/10.1108/978-1-80043-171-320211009>
12. C. Hofacker, I. Golgeci, K.G. Pillai, D.M. Gligor, *Europ. J. Market.* **54(6)**, 1161-1179 (2020). <https://doi.org/10.1108/EJM-04-2020-0247>
13. K. Koskela-Huotari, B. Edvardsson, J.M. Jonasc, D. Sörhammar, L. Witell, *J. Bus. Res.* **69(8)**, 2964-2971 (2016). <https://doi.org/10.1016/j.jbusres.2016.02.029>
14. A. Marshall, A. Lipp, K. Ikeda, R.R. Singh, *Strat. Leadership* **48(4)**, 17-27 (2020). <https://doi.org/10.1108/SL-04-2020-0055>
15. G. Pooya, N. Cheng, A. Marshall, J. Dencik, N. Agrawal, *Strat. Leadership* **49(5)**, 23-30 (2021). <https://doi.org/10.1108/SL-07-2021-0076>
16. *Upravlenie Federalnoi sluzhby gosudarstvennoi statistiki po Severo-Kavkazskomu federalnomu okrugu* [Department of the Federal State Statistics Service for the North Caucasus Federal District] (2022). Accessed on: November 01, 2022. [Online]. Available: <https://stavstat.gks.ru/>