The ways to improve the interaction between executive authorities and business entities in the sphere of forestry

E Kolesnichenko¹, E Panyavina², Yu Sokolinskaya³ and O Netrebskaya²

¹Department of Economics, Management and Service, Tambov state university named after G R Derzhavin, 6 Sovetskaya Street, Tambov 392002, Russian Federation
²Department of Economics, Voronezh State University of Forestry and Technologies named after G F Morozov, 8, Timiryazeva Street, Voronezh 394030, Russian Federation
³Department of Economic Security and Financial Monitoring, Voronezh State University of Engineering Technologies, 19 Revolution Avenue, Voronezh 394000, Russian Federation

E-mail: nio_kolesnichenko@vgtu.ru

Abstract. The effective development of the forestry sector mainly depends on the specifics and ways of interaction between business entities and the bodies of government, since the land resources are owned by the state. The authors analyzed the normative legal acts regulating the interaction between the state and business entities in the sphere of forestry. They also systematized and analyzed the factors that determine the effectiveness of this interaction. Taking into account the activities of the government bodies and enterprises, the authors paid special attention to differentiation and systematization of the factors. After applying the interview method, organizing a brainstorm and carrying out the hierarchy analysis, the authors concluded that the economic factor is the most important. The authors formulated a number of recommendations concerning the regulatory and legislative support as well as the infrastructure provision and the support for small and medium-sized enterprises. The authors generalized a lot of analytical, research and legislative material to give an idea of the modern forms and methods of interaction between the executive authorities and business entities in the sphere of forestry. Apart from that, the authors analyzed the interaction of the mentioned structures in the sparsely wooded areas.

1. Introduction

The authors of the article deal with a topical problem since the modern economy depends on the mechanisms of interaction between the executive authorities and business entities.

Forest sector support and enterprise management are reviewed in publications over the past three years [1]. Modern forest sector management [2] and development issues are relevant in modern research [3].

In modern economic conditions, special attention should be paid to the mechanism of interaction between the state and business entities in the sphere of forestry, since the land resources are mainly owned by the state and leased to entrepreneurs [4]. There are different forms and ways of interaction: the infrastructure of the economic system is created; favorable conditions for effective functioning are provided; specific economic policy is used [5]. The normative legal acts regulating the activities in the forestry sector at different levels are presented in figure 1.
Figure 1. Normative legal acts regulating the interaction between the state and business entities in the sphere of forestry.

Undoubtedly, business entities and authorities cannot function on their own. Therefore, the executive authorities always aspire to create an effective mechanism of interaction with entrepreneurs. Thus, it is necessary to take into account and analyze the factors that determine the interaction between the executive authorities and business entities in the sphere of forestry [6].

Therefore, the interaction between the state and business structure plays an important role in the modern business conditions. The purpose of this research is to formulate a recommendations concerning the regulatory and legislative support as well as the infrastructure provision and the support for small and medium-sized enterprises.

2. Methods and materials
The authors of the study applied the methods of monographic survey, comparison and systematization to analyze the specific features of the interaction between the state and business entities in the sphere of forestry. Analyzing the extent of the state support for entrepreneurship in the forest sector, the authors identified and analyzed the factors that determine the effectiveness of the work of the executive authorities in the sphere of forestry [6].

It should be noted that the executive bodies performing regulatory functions consider the problem of interaction with entrepreneurs. However, they pursue their own interests and focus on specific
problems, expectations and requirements [7]. The authors identified which factors affect the functions of the authorities that carry out their responsibilities at the federal level. The factors that determine the work of the executive bodies in the forestry sector can be divided into two groups which are presented in table 1.

Table 1. Factors determining the work of executive bodies in the sphere of forestry.

| Group of factors           | Factors                                                                                                                                                                                                 |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Economic factors           | Increase in the number of entrepreneurs, eradication of shadow entrepreneurship, expansion of the competition boundaries of entrepreneurs, replenishment of the budget and treasury, cooperation of entrepreneurs, exploitation of hard-to-reach forest plots, improvement of the independence of forest sector entrepreneurs in the future, reduction of the share of shortcomings in the medium term, absence of shortcomings in the long term, increase of investment attractiveness of the Territory, increase of demand and supply for products (Services) of forest entrepreneurs, reduction of inflation growth, reliable economic and statistical information from business, Subordination of accounting to tax purposes, increase of regional income, stable payment turnover on obligations, Reduction of the number of entrepreneurs with financial crisis, timely technical re-equipment, Import substitution of technical re-equipment, expansion of regional market capacity, adequate and reasonable demand for credit resources, Reduction of litigation, rational production and management, satisfaction of market needs. |
| Social- and ecological factors | Growth of innovation and investment attractiveness of the industry, formation of the average solvent class of the population, Use of unproductive forest plots, increasing regional and interregional authority, Creation of new jobs, favourable social atmosphere, interest of society in forest entrepreneurship, Creation of material goods for ensuring the life of society, protection of ecology and environmental protection of the region, Rational use of waste, integration of research and development in the development of the industry, utilization of scientific and technological progress, fulfillment of fire safety obligations. |

Not only the executive authorities but also entrepreneurs are interested in their interaction. The factors that determine their cooperation are related to their main goal - to gain profit. However, entrepreneurship is a structure that is dependent on the executive authorities; therefore, the factors that determine their interaction are generalized and divided into external and internal.

External factors are related to the economic environment which has a great influence on the business entities engaged in the sphere of forestry. It should be noted that the economic environment totally depends on local executive authorities (but not completely, because generally, the economic situation depends on public authorities).

Internal factors characterize the current situation at the enterprise. The current state of financial, industrial, administrative and social activities of an enterprise is determined not only by internal management, but also by external factors.

Based on the research and their own practical experience, the authors identified the external and internal factors that determine the interaction between the executive authorities and business entities in the sphere of forestry (table 2).

To identify the specific factors of interaction, the researchers proposed to use a systematic approach, which implies [8]:
- building a system of specific factors by means of applying the method of expert assessments;
- the application of the method for setting priorities and establishing their significance;
- distribution of the most significant factors in accordance with cyclicality and synchronization.
The expert group consisting of managers and economists of small enterprises applied a logical method to select eight factors that determine the interaction between the executive authorities and business entities in the sphere of forestry.

Table 2. External and internal factors determining the interaction between the executive authorities and business entities in the sphere of forestry [9].

| Group of factors | Factors                                                                 |
|------------------|-------------------------------------------------------------------------|
| External factors | Orientation of the regional economy towards interaction, regulation of inflation, stability of the market, Balance of credit system, specificity of low-forest region, stable strategic functioning, regulation of regional market capacity, Stock market activity and competitiveness, currency market stability, adequate conduct of business with foreign investors, Low cost of credit resources, favourable economic climate for doing business, Stability of regulatory legislation, working legal basis, payment collection of federal and municipal authorities on their orders and obligations, stability of the national system (Excise rates, taxes), energy subsidies, light administrative burden, lack of bureaucratic racketeering, Effective enforcement of court decisions, necessary amendments to forest legislation, Improving the quality of decisions taken by power agents, negative weather and natural disasters, Improvement of crime situation, sufficient level of scientific, technical and information development for doing business, Creation of scientific benefits for ensuring the life of society, adequate requirements for environmental protection and protection of the environment. |
| Internal factors | Inefficient current cost structure (high proportion of fixed costs), inefficient production management, The lack of compliance with the management and organizational culture of its technological structure, Insufficient quality accounting and reporting system, emergence of management conflicts, Deterioration of contractual relations with suppliers and consumers of products, reduction of control over compliance with management decisions, Lack of quality control and output control, lack of financial control over profitability, Inefficient investment management, high level of overhead, non-core costs, transportation costs, Inefficient financial management, reduced level of investment attractiveness, ill-conceived capital investments, Failure to achieve planned profit volumes for realized real projects, erroneous composition of business plan for new projects, Lack of capital for production modernization, non-efficient marketing, low competitiveness of products, Low activity on development of new products, services, lack of reliable deployed distribution network, Lower sales volume, inefficient price policy of the organization, weak analysis and accounting of prices for products and services of competitors, Low asset utilization, equipment downtime, obsolete and worn-out fixed assets, obsolete manufacturing technology (Service delivery), inefficient financial strategy, inefficient asset structure (low liquidity), Increased share of leverage, high share of short-term sources of leverage, increased receivables, increased payables (Suppliers, budget, staff), increased rental costs of premises and plots, equipment, lack or lack of necessary skills of staff, use of unreliable economic information, lack of statistical information for research. |

The factors determining the work of the executive authorities in the sphere of forestry are presented in table 3.
Table 3. The factors determining the work of executive bodies in the sphere of forestry.

| Group of factors               | Factors                                                                 |
|-------------------------------|-------------------------------------------------------------------------|
| **Economic factors**          | 1. Increase in number of businessmen                                     |
|                               | 2. Eradication of shadow business                                        |
|                               | 3. Budget replenishment and treasury                                     |
|                               | 4. Reduction in the proportion of shortfalls in the medium term          |
|                               | 5. No shortfalls in the long term                                        |
|                               | 6. Increasing the investment attractiveness of the region                |
|                               | 7. Reduction in the number of entrepreneurs with financial crises       |
|                               | 8. Sound production and management                                       |
| **Social-and-ecological factors** | 1. Growth of innovation and investment attractiveness of the industry |
|                               | 2. Formation of the average solvent class of the population             |
|                               | 3. Use of unproductive forest areas                                      |
|                               | 4. Enhancing regional and interregional authority                        |
|                               | 5. Creating new jobs                                                     |
|                               | 6. Environmental protection and protection of the region                 |
|                               | 7. Building on advances in science and technology                        |
|                               | 8. Performance of fire safety obligations                                 |

The external and internal factors determining the interaction between business entities with executive authorities in the sphere of forestry are presented in table 4.

Table 4. The external and internal factors determining the interaction between business entities with executive authorities in the sphere of forestry.

| Group of factors   | Factors                                                                 |
|--------------------|-------------------------------------------------------------------------|
| **External factors** | 1. Specifies of the low-forest region                                  |
|                    | 2. Stable strategic functioning                                          |
|                    | 3. Cost of credit resources                                              |
|                    | 4. Stability of the regulating legislation                               |
|                    | 5. Working legal basis                                                   |
|                    | 6. Stability of the tax system (excise, tax rates)                      |
|                    | 7. The facilitated administrative loading                                |
|                    | 8. Effective enforcement mechanism                                       |
| **Internal factors** | 1. Inefficient current cost structure (high fixed cost)                 |
|                    | 2. Inefficient production management                                     |
|                    | 3. Lack of financial control over profitability                          |
|                    | 4. High overhead, non-core, transportation costs                        |
|                    | 5. Inefficient financial management                                      |
|                    | 6. Low asset utilization, equipment downtime                             |
|                    | 7. Obsolete and worn-out fixed assets                                    |
|                    | 8. Increase in rental costs of premises and plots, equipment            |
Since there are too many different factors, it is rather problematic to conclude which of them determine the interaction between the executive authorities and business entities in the sphere of forestry.

In order to systematize the factors and establish their significance, the method of prioritization was used, which implied using a computer to process the factors (selected by means of the logical analysis) and to determine the extent of their reciprocal influence. It was based on the expert assessments and matrix recording [10].

In accordance with the calculations, the factors having the largest relative weight in their group were selected. When developing a mechanism of interaction between the executive authorities and business entities in the sphere of forestry, it is necessary to take into account the interests of both sides and to seek common ground.

3. Results and discussion
Taking into account the generally accepted stages of making a managerial decision, the authors developed some forest management techniques based on the multi-purpose and integrated use of the regional forest resources (figure 2).

The authors selected sixteen factors, which are of the greatest importance for determining the interaction between the executive authorities and business entities in the sphere of forestry. The factors and their relative weights are presented in table 5 [5].

![Diagram of forest management techniques]

**Figure 2.** Forest management techniques based on the multi-purpose and integrated use of the regional forest resources.

Based on the data from table 5, we can draw the following conclusions. The economic factors are the most influential, since they determine the activities of small business entities and regulate the current situation of the forest industry. Socio-ecological, internal and external entrepreneurial factors are less influential.

Since economic factors are of great importance, it is clear that currently rental relations are the most common form of interaction between the executive authorities and business entities in the sphere of forestry. In leased forest areas, forest management work is performed by the lessee. In addition,
after an agreement with the lessee is concluded, contractors and subcontractors may also be engaged in the forestry works. In this case, the state, the owner of the forest resources, leases forest plots on condition that the business entities restore the resources and provide sanitary and fire-prevention measures [11].

Table 5. Priority factors determining the interaction between the executive authorities and business entities in the sphere of forestry.

| Factors                                                      | Importance of a factor |
|--------------------------------------------------------------|------------------------|
| 1) Replenishment of the budget and treasury                  | 0.20345                |
| 2) Increase in the number of entrepreneurs                    | 0.19813                |
| 3) Reduction in the share of underexpenditures in the medium term | 0.16770                |
| 4) Increase the investment attractiveness of the region       | 0.14882                |
| 5) Reduction in the number of entrepreneurs with financial crises | 0.12261                |
| 6) Specificity of the low-forest region                       | 0.12112                |
| 7) Light administrative load                                  | 0.12003                |
| 8) Obsolete and worn out fixed assets                         | 0.11956                |
| 9) Use of unproductive forest plots                           | 0.11564                |
| 10) Stability of regulatory legislation                        | 0.11234                |
| 11) Low cost of credit resources                              | 0.11012                |
| 12) Performance of fire safety obligations                     | 0.10921                |
| 13) Building on advances in science and technology             | 0.10832                |
| 14) Increase in rental costs of premises and plots, equipment | 0.10744                |
| 15) High overhead, non-core, transportation costs             | 0.10176                |
| 16) Low asset utilization, equipment downtime                  | 0.09632                |

The amendments to the Forest Code introduced a new way to conclude a forest lease agreement for timber harvesting (on the competitive basis). Moreover, some amendments were introduced to the Forest Code to improve the procedure for organizing auctions for the right to conclude lease agreements for forest plots as well as agreements on purchase and sale of forest plantations. In this case, in accordance with the documents, the candidates are to demonstrate technical characteristics and wood processing facilities and provide arguments on why they need certain species of wood.

However, rental agreements are often concluded only if the forest areas are attractive for investors, productive and are located close to settlements. As for sparsely wooded areas, they mainly have a protective function. Although, these areas are rather small, they are especially important for the environment and population. So, it is necessary to develop a new tool to support entrepreneurship and propose a mechanism of interaction between the government and business entities in the sphere of forestry.

4. Recommendations

We consider it necessary to use a new mechanism of interaction between the executive authorities and business entities in the sphere of forestry (a concession agreement). In our opinion, this mechanism of interaction is useful for forest regeneration and, therefore, it has significant potential in the sphere of forestry in sparsely wooded areas [7].

It goes without saying that the specifics of each forest plot should be taken into consideration. The factors that matter most include the location of the site, the distance from the bodies of water, from the places of public entertainment, from federal highways, etc. Business success depends on the entrepreneur’s personality, strategies and business development plan. In our opinion, sparsely wooded areas can be useful for:

1) hunting industry;
2) farming;
The authors correlated the concession mechanism with the current state of forestry to get a rough idea of how the executive authorities interact with business entities under concession agreements. The new mechanism of interaction between the executive authorities and business entities in the sphere of forestry is presented in figure 3.

Thus, the authors argue that it is crucial to study and improve the areas of interaction between the executive authorities and business entities.

Taking into account the specifics of the sparsely wooded areas, the researchers claim that it is necessary to [11]:

1. Provide regulatory and legislative support:
   - in accordance with federal law "On Amendments to the Forest Code of the Russian Federation with regard to the improvement of the procedure for the use of forests with and without the provision of forest plots", rental agreements are concluded only with reliable leaseholders. Thanks to these amendments, entrepreneurs avoid a number of administrative barriers, which makes the sparsely wooded areas more attractive for honest taxpayers;
   - it is vital to centralize forest management and transfer forest management functions to federal executive bodies. Thanks to these measures, it will be easier to get true information on forest cover, species, composition and other natural specifics of a sparsely wooded area;
   - it is necessary to reform the system of conservation and protection of forests, which will reduce the fire risks in sparsely wooded areas and will control illegal logging [12];
it is crucial to develop a legislative framework that will ensure that polluted forest plots are leased to entrepreneurs who will take measures to contribute to reforestation.

2. Provide infrastructure support by means of:
   - creation of new industrial and technology parks;
   - development of the infrastructure of innovations and high technologies thanks to the implementation of the program aimed at the creation of regional engineering centers;
   - formation and development of the forest cluster of the sparsely wooded areas. It will increase the production of goods and services at the enterprises participating in cluster activities.

3. Provide support for small and medium-sized enterprises by means of:
   - a differentiated approach to calculating the size of payments made for the use of forest resources;
     - offering higher compensation for the costs of reforestation;
     - offering grants to new entrepreneurs;
     - offering favorable tax treatment and tax holiday to the enterprises efficiently contributing to reforestation;
   - stimulating the development of entrepreneurship in sparsely wooded areas.

4. Interact with state institutions by means of:
   - cooperation with employment centers;
   - creation of a forest business incubator.

Afterwards, it is necessary to determine the effectiveness of the proposed activities. To do this, the authors take into account a number of factors that determine the reasonability and economic efficiency of the interaction (goals; planned results; if the partner is able to meet expectations; financial indicators; risks; the impact on the economy of the region).

The use of concession mechanisms in sparsely wooded areas will not only reduce the cost of budgetary funds and attract new financial resources to state-owned enterprises, but it will also create additional sources of budgetary income in the form of tax revenues and concession payments.

5. Conclusion
The interaction between the executive authorities and business entities can be described as a system of mutual relations. Using economic, social and natural resources, they pursue their own interests and aspire to gain maximum profit. These relations act as the driving force of the regional economy.

The authors proposed and thoroughly studied the concept of concession as a new and more effective mechanism of interaction between the executive authorities and business entities in the sphere of forestry. This form of interaction under concession agreements corresponds to the specifics of sparsely wooded areas. The authors of the article illustrated how this mechanism works.

Based on the research results, the authors claimed that it is crucial to study and improve the areas of interaction between the executive authorities and business entities by means of:
   a) regulatory and legislative support;
   b) infrastructure support;
   c) support for small and medium-sized enterprises;
   d) interaction with state institutions;
   c) development and implementation of other mechanisms of interaction between the executive authorities and business entities in sparsely wooded areas.

References
[1] Panyavina E, Rafailov M, Vovchenko N 2018 Crisis management of forestry enterprises. IOP Conference Series: Earth and Environmental Science 226 012044 DOI: 10.1088/1755-1315/226/1/012044
[2] Zinovieva I, Pryadilina N, Semin A, Skvortsov E 2019 Practices of forest exploitation in priority investment projects: benefits and implications. IOP Conference Series: Earth and
Environmental Science 392 012020 DOI: 10.1088/1755-1315/392/1/012020

[3] Ivanova A, Malitskaya V 2019 The economic aspect of new ways of obtaining innovative forest biotechnology products. *IOP Conference Series: Earth and Environmental Science* 392 012023 DOI: 10.1088/1755-1315/392/1/012023

[4] Sokolinskaya Yu 2015 The role of small business in the development of the forestry sector of the Russian economy. *Forest Technical Journal* 5 3(19) 282 [in Russian]

[5] Burmistrov A 2019 Cooperation between authorities and business entities in forestry. *IV Int. Scientific and Practical Conf. "Modern personnel technologies in the management of enterprises and territories"* (Derzhavinsky, Tambov) pp 8–18

[6] Kolesnichenko E, Sokolinskaya Yu and Popova Yu 2019 Development of small enterprises in forestry sector. *IOP Conference Series: Earth and Environmental Science* 226 012059 DOI: 10.1088/1755-1315/226/1/012059

[7] Panyavina E, Sijacic-Nikolic M 2019 State support of forestry enterprises in the Russian federation in times of crisis. *IOP Conference Series: Earth and Environmental Science* 392 012021 DOI: 10.1088/1755-1315/392/1/012021

[8] Kopylova Y, Avdeeva I 2016 Factors of development of sectoral enterprises. *Actual directions of scientific research of the XXI century: theory and practice* 4 2(22) 108 [in Russian]

[9] Timoshenko N 2010 Methods of preventive diagnostics of systemic insolvency of Russian enterprises. *Property Relations in the Russian Federation* 4(103) 45 [in Russian]

[10] Kharchenko N, Morkovina S, Kapitonov D and Lisova O 2018 Forest ecosystem services in the system of sustainable forest use of sparsely forested regions of Russia. *Journal of Engineering and Applied Sciences* 13(10) 3567 DOI: 10.36478/jeasci.2018.3567.3572

[11] Morkovina S, Ivanova A, Seydinay E 2018 Tools for supporting forest business that ensure efficient forest management and restoration of forest resources in low-forest regions. *IOP Conference Series: Earth and Environmental Science* 226 012040 DOI: 10.1088/1755-1315/226/1/012040

[12] Katkova T 2012 Features of the mechanism of risk management in forestry in the conditions of branch reforming. *European Social Science Journal* 11 (27) 394 [in Russian]