Improving the mechanism of interaction between public and private enterprises

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Abstract. The purpose of this paper is to improve methodological provisions for the organization and practical implementation of the interaction of public and private enterprises in order to increase the efficiency of their activities, taking into account mutual interests. A model has been formed for assessing the efficiency of overcoming administrative barriers by entrepreneurial entities, which is based on taking into account the price and time for entrepreneurs to overcome problems in running their business. The system of indicators for the development of interaction between public and private enterprises is structured, which allows analyzing trends in the development of interaction processes in a wide range of areas: resource availability, administrative barriers, development of competition, ensuring the security of business, information openness, innovative development.

1 Introduction

The interaction of public and private enterprises is the basis for the renovation of the national economy, and its efficiency depends on the willingness of representatives of state structures and business entities to join forces to achieve economic growth, the degree of motivation to optimize relationships and the principles of interaction. Nowadays, the balance of interests between government agencies and business entities in matters of further development has not been found - the theses declared by state structures often remain unfulfilled, in turn, the confidence of business entities decreases, the investment climate worsens, capital outflows from the country grow. At the same time, fiscal pressure on entrepreneurial activity is increasing, the expectations of government agencies are growing. In such circumstances, business entities are in a difficult position [1].

This makes it expedient to search for new models, forms, mechanisms for organizing the interaction of government agencies and business entities on the basis of the addition and development of the conceptual foundations of the joint activities of the state and business entities, adequate both to the principles of state regulation of the economy, reflecting the interests of society, and to motivational attitudes to entrepreneurship. The introduction of

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new algorithms, models, mechanisms into the practice of interaction between government and business entities will increase, in the author's opinion, the efficiency of government spending, the investment attractiveness of the regions, and the level of entrepreneurial activity.

2 Materials and methods

Figure 1 presents a multi-parameter classification of interaction between government and business entities. Classifying the interaction of government and business entities on the basis of mutual loyalty, the authors came to the following conclusions: achieving the optimal level of mutual loyalty allows the government, business entities, society as a whole to develop stably, make decisions that satisfy the parties more quickly. On the way to achieving the optimal level of mutual loyalty, the elements of interaction go through certain stages of maturity, which can also be attributed to the signs of classifying the interaction of the state and business.

Loyalty as a category of assessing the interaction of government and business entities was considered by many researchers. However, in some sources, one can find not quite clear or even contradictory interpretations of this concept, when mutual loyalty is understood as a process based on mutual expectation or a process aimed at establishing loyalty in exchange for loyalty [2].
Mutual loyalty means the degree of coincidence, combination, coordination of the interests of government and business entities in order to achieve the efficiency of the participants in the dialogue at their points of contact (Fig. 2).

Fig. 2. Achieving the optimal level of loyalty of government and business entities.

It is important to emphasize that the achievement of an optimal level of loyalty is possible due to continuous improvement of the regulatory framework, the role of public associations, the development of self-regulatory institutions and public-private partnership institutions, mutual efforts both on the part of public authorities and business entities and their associations for the purpose of creating favorable conditions for the development of entrepreneurship and socio-economic status of the regions as a whole [3].

Determining the tendency to maintain and build up administrative barriers in investment and construction activities, the author proposes a new approach to assessing the probability of overcoming barriers by entrepreneurial entities. The main issue to be solved was the development of a formalized model based on the tunneling effect, the essence of which is to determine the probability of overcoming an energy barrier of a certain width. In this area, administrative barriers are overcome by spending financial and time resources. Using this analogy, we have proposed a formula that determines the probability of overcoming the barrier:

$$A_{adm} = M_1 \cdot M_2 \cdot \exp\left[1 - T_{nt} \left(C_{np}\right)^\frac{1}{2}\right],$$

where $A_{adm}$ – the probability of overcoming the administrative barrier, $M_1$ – the transparency of the business environment, $M_2$ – the transparency of the activities of government agencies, $T_{nt}$ – the ratio of the standard time for “passing” the barrier to the actual time, $C_{np}$ – the ratio of the standard cost for “passing” the barrier to the actual one.

The parameters included in the proposed formula are clearly illustrated in Fig. 3. The conceptual basis of administrative barriers lies in the fact that the formal mandatory rules of doing business in the markets for goods and services established by government agencies increase the likelihood of private costs exceeding benefits for business entities, taking into account the income effect. The relative width and relative height of the barrier are determined by the ratio of actual values to the relevant standards. The decrease in the probability of passing the barrier is hindered by the opacity associated not only with the administrative factor, but also with the business environment [4].
The probability calculated by the formula varies from 0 to 1, and the higher it is, the more likely it is to “pass” the barrier. The desire to bring transparency, relative cost, and time to 1 increases the efficiency. The experimental material processed using the proposed formula made it possible to establish that the efficiency of overcoming administrative barriers can reach 0.1. However, the usefulness of the presented formula lies in solving the inverse problem, which consists in determining such parameters for which the efficiency of overcoming the barrier would be negligible. In particular, this is necessary to establish penalties for compliance with administrative regulations of a social nature. Thus, the developed model for assessing the efficiency of overcoming administrative barriers from a practical point of view allows an adequate assessment when making strategic decisions by business entities [5, 6].

3. Results

The quality of interaction between government and business entities can be described as a set of characteristics. The proposed indicators were identified in the course of the study of interaction problems, the significance of which was determined by ranking, in one of the possible scales used in the expert assessment. The general scheme of the developed monitoring assessment methodology is presented in Fig. 4. According to this method, the author carried out a monitoring study of the state of the system of interaction between government agencies and business entities.
Defining a list of key indicators in assessing the system of interaction between government and business entities

Assessment of relevance of indicators on a 10-point scale by a variety of experts and the formation of statistics on the distribution of expert estimates

Formation of minimum, average and maximum conditional estimates of point distributions for each indicator, their ranking and verification of the statistical hypothesis of the concordance of three rank series

Calculation of weight values that determine the relevance of indicators in accordance with their marginal and average estimates

Calculation of a complex indicator in accordance with various assessments of the relevance of indicators, which together determine the average assessment of the interaction of government and business entities and the error in its determination

Determining the need and point of application of efforts to improve the interaction system

Fig. 4. A scheme for conducting a monitoring assessment of the interaction of government agencies and business entities.

During the study, the experts filled in a matrix of 50x10 elements, each of which is an integer j varying from 0 to 10 (a zero value is the absence of any relevance). Experts will have different opinions for each indicator, and these opinions can be presented in the form of corresponding distributions, which are shown in table 1.

Table 1. Determining the significance of indicators of the efficiency of interaction between government bodies and business entities.

| i | Indicators                                                | The number of experts who assigned a specific score $q_{ij}$ to indicators | Total points $Q_i$ | $W_i$ |
|---|-----------------------------------------------------------|---------------------------------------------------------------------------|-------------------|-------|
| 1 | Information transparency of authorities                  | 1 3 7 13 15 11 421                                                        | 0.153             |
| 2 | Degree of confidence of entrepreneurs in the activities of state authorities | 1 2 6 12 11 8 6 4 348                                                    | 0.127             |
| 3 | Compliance with the law in the activities of the parties | 1 4 8 10 11 7 3 4 2 291                                                   | 0.106             |
| 4 | The activities of government bodies to reduce            | 1 1 2 2 8 9 11 16 416                                                     | 0.151             |
| Indicator                                                                 | Values | Weight \(W_i\) | Relevance | \\
|--------------------------------------------------------------------------|--------|----------------|------------|
| The level of administrative barriers to entrepreneurship                  |        |                | 0.054      |
| The activities of self-regulatory organizations in the field of reducing administrative barriers | 10, 12, 14, 5, 5, 2, 1, 1 | 148 | 0.054      |
| The number of administrative barriers in the construction industry        | 1, 4, 7, 9, 12, 17 | 428 | 0.156      |
| Regulation of procedures for obtaining permits, approvals, etc.           | 7, 8, 6, 13, 8, 5, 2, 1 | 185 | 0.067      |
| Availability of resources necessary for the implementation of investment projects | 15, 8, 6, 5, 4, 3, 4, 4, 1 | 176 | 0.064      |
| Degree of business security                                               | 11, 13, 10, 7, 3, 3, 1, 1, 1 | 152 | 0.055      |
| Market access level                                                       | 7, 8, 8, 9, 10, 5, 2, 1 | 185 | 0.067      |

Weight \(W_i\) (relevance) of each indicator is determined by the formula:

\[
W_i = \frac{\sum_{j=0}^{10} j \cdot q_{ij}}{\sum_{i=1}^{n} \sum_{j=0}^{10} j \cdot q_{ij}}.
\]

In general, the distribution of indicators by their significance in accordance with the ranks assigned according to the previously determined weights for the system of relations between government and business entities is as follows:

1. The number of administrative barriers \((W_1=0.156)\).
2. Information transparency of authorities \((W_2=0.153)\).
3. The activities of government agencies to reduce the level of administrative barriers to entrepreneurial activity \((W_3=0.151)\).
4. The degree of confidence of entrepreneurs in the activities of state authorities \((W_4=0.127)\).
5. Compliance with the law in the activities of the parties \((W_5=0.106)\).
6. Availability of resources necessary for the implementation of investment projects \((W_6=0.067)\).
7. Regulation of procedures for obtaining permits, approvals, etc. \((W_7=0.067)\).
8. Market access level \((W_8=0.064)\).
9. Degree of business security \((W_9=0.055)\).
10. Activities of self-regulatory organizations in the field of reducing administrative barriers \((W_{10}=0.054)\).

In accordance with the purpose of the study, a mechanism has been proposed to improve the interaction of government and business entities, which combines the scientific results developed during the study (Fig. 5) \([1, 7, 8]\).

Fig. 5. The mechanism for improving the interaction of public and private enterprises.

4 Discussion

Recently, the government has been actively declaring the creation of conditions for the development of a competitive environment, reducing the level of monopolization, stimulating the creation of new innovative areas of activity and the development of new entrepreneurial entities of small and medium-sized businesses.

However, the existing order of interaction between government and private enterprises does not ensure maximum achievement of goals, which is confirmed by the presence of a number of problems restricting the development of entrepreneurial activity: the presence of administrative barriers, inaccessibility of resources, insufficient information transparency of state authorities, underdeveloped antitrust laws, low level of business security, etc.

5 Conclusion

The proposed methodology for regular monitoring assessment of the interaction of government agencies and business entities, the use of which will reduce the level of administrative impact on business entities in the implementation of state regulation, will increase the level of trust between government and business entities. In addition, the multi-parameter classification of the interaction between public and private enterprises presented in the paper is supplemented by relevant classification features, which will make it possible
to assess the level of mutual loyalty of the entities and the degree of maturity of their interaction.

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