Assessing the Effectiveness of Government Measures for the Development of Small and Medium-Sized Enterprises in the Russian Federation in the Context of Foreign Economic Sanctions

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Abstract: The aim of the study is the conceptual development of tools for assessing the effectiveness of government measures for the development of small and medium-sized enterprises in the context of foreign economic sanctions, based on the econometric analysis of the indicators of small and medium-sized enterprises (the number of small and medium-sized enterprises, the number of people employed in the field of entrepreneurship) and the allocated financial resources under federal and regional programs to support entrepreneurship («My Business», «Social Entrepreneurship»). The scientific proposal of the authors, used in this article, is to substantiate the importance in the conditions of foreign economic sanctions to expand the access of small and medium-sized businesses to financial resources. This is done through the priority implementation of state support programs for entrepreneurship. Based on the available statistical data, the authors proved that government initiatives to implement federal and regional programs to support entrepreneurship contribute to the increase in the number of small and medium-sized enterprises, which indicates their effectiveness.

1 INTRODUCTION

Small and medium-sized entrepreneurship plays an important role in the economy of any country, including the Russian Federation. It helps to create new jobs, increase tax revenues to the budget, and stimulate innovation.

As part of the state policy for the development of small and medium-sized enterprises in Russia, various support measures are being implemented. These include, for example, subsidies for business development, soft loans, tax preferences, training and counselling of entrepreneurs. However, in the current conditions of economic development of the Russian Federation, the issue of support and development of small and medium-sized entrepreneurship becomes particularly relevant. One of the key factors affecting the activities of entrepreneurs is foreign economic sanctions imposed on the country as a result of political conflicts.

Foreign researchers state the growing global interconnectedness of countries and assess the unfavorable consequences of sanctions that disrupt economic ties between countries and lead to significant welfare losses (e.g., Bagheri S., Akbarpour H.R., 2016; Felbermayr G., Morgan T.C., Syropoulosc C., Yotov Y.V., 2021). Economic sanctions are considered by foreign researchers as the use of economic instruments to achieve political goals by restricting trade and economic interaction between countries for political and military reasons (e.g., Chevalier M., 2023; Moteng G., Njangang H., Nvuh-Njoya Y., Ndeffo Nembot L., 2023). Researchers (Du X., Wang Z., 2022; Nguyen T.T., Do M.H., 2021) have identified the negative mechanisms underlying decisions to impose economic sanctions as foreign policy instruments, as well as the consequences of

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these decisions on the world economy.

Indeed, under the conditions of sanctions, the effectiveness of implemented government measures for the development of small and medium-sized enterprises is limited. Sanctions lead to deterioration of the foreign economic situation, which, in turn, affects the turnover of small and medium-sized enterprises. Many entrepreneurs as a result of sanctions find themselves in a difficult financial situation and cannot function effectively.

According to the studies of Russian scientists (Aliev O.M., Ibragimova D.M., 2022; Bezugly E.A., Tkachenko V.V., Mikhailikov V.L., 2022; Ivanov O.B., Buchwald E.M., 2022; Levkina N.N., 2022; Sedrakyan, G.S. 2022), the implementation of a set of economic sanctions against the Russian Federation in early 2022 negatively affected the activities of most entrepreneurs, especially small and medium-sized enterprises, many of which are engaged in retail trade. Researchers suggest that mitigating the effects of anti-Russian sanctions will be helped by promoting the growth of domestic production and supporting businesses through government initiatives.

Critical analysis of published research on this issue shows that entrepreneurs face a number of reasons that hinder the use of state support measures in the context of economic sanctions. The main factors identified by researchers (Antyushin M.V., Guskova I.V., Serebrovskaya N.E., 2022; Kolchugina A.V., 2022; Shipova E., 2023) are the lack of information about available support tools, lack of confidence in government programs, insufficient financial assistance and doubts about the effectiveness of economic policy. Other authors (Ermolov N.S., 2022; Gurash S.V., 2022; Nguyen T.T., Do M.H., 2021) also note problems in understanding support programs, the lengthy process of preparing the necessary documents, difficulties in reporting after receiving assistance, strict checks on the targeted use of funds, and the sharing of negative experiences among entrepreneurs.

2 MATERIALS AND METHODS

The study is based on a unique database on the amount of funding for each region from 2019 to 2022 under federal and regional programs to support entrepreneurship («My Business — Self-Employed», «Social Entrepreneurship», «My Business – Involvement», «Export Support Centers», «Monocities», «Industrial Parks», «Guarantee Funds», «Microfinance Institutions», «Popularization of Entrepreneurship», etc.). The differentiation of the number of small and medium-sized enterprises by regions of Russia was assessed by means of descriptive statistics indicators and taken into account in the calculations by including dummy variables in the regression equations. To quantify the impact of state support measures on the development of small and medium-sized enterprises, we used generally recognized econometric models: linear, hyperbolic, step and exponential. Each of the equations was estimated in the study by the method of least squares using the program «STATISTICA». Also, each of the regressions obtained was evaluated by correlation index, mean relative error, coefficient of determination and Fisher's F-criterion. All parameters of regression equations were tested by Student's t-test and p-value.

3 RESULTS AND DISCUSSION

To assess the effectiveness of government measures for the development of small and medium-sized entrepreneurship in the context of foreign economic sanctions, we will conduct an econometric analysis based on the indicators of small and medium-sized entrepreneurship (the number of small and medium-sized enterprises and the number of people employed in entrepreneurship) and the financial resources allocated under federal and regional programs to support entrepreneurship («My Business», «Social Entrepreneurship», «Export Support Centers», «Mono-entrepreneurship»).

The data on the distribution of small and medium-sized enterprises in the constituent entities of the Russian Federation were used as the initial statistical population. The number of subjects is 85.

In order to analyze the effectiveness of state programs to support entrepreneurship in the conditions of foreign economic sanctions, conducted in 2019, let us consider the number of small and medium-sized businesses (including newly created entities) in 2020 as a resultant attribute. Let us carry out descriptive statistics of this initial statistical population. The results are presented in Table 1.

Table 1: Indicators of descriptive statistics on number of small and medium-sized enterprises in the Russian Federation for 2020.

Indicators	Result
minimum	1 390
maximum	748 354
variation range	746 964
mean	69 611
geometric mean	40036,63636

median	42 544
dispersion	9 850 535 885,73
skewness	4,447942465
skewness error	0,259541265
excess	24,72610003
excess error	0,486855425
n	85
standard deviation	99249,86592

Source: compiled by the authors.

The minimum value was 1,390 units in Chukotka Autonomous region, which is associated with the smallest population in this subject. The maximum value was 748,354 units in Moscow and 359,777 units in St. Petersburg. The range of variation is 746,964 units, which indicates an uneven distribution of small and medium-sized enterprises among the regions of the Russian Federation. Asymmetry characterizes the degree of asymmetry of the distribution relative to its average and is 4.45. As >0, i.e., $\bar{x}$>Mo, hence the skewness of the series is right-sided. The error of asymmetry is 0.26 < 3, hence asymmetry is insignificant, and its presence is explained by the influence of random factors. The kurtosis is 24.7, which is greater than 0 and characterizes the relative sharpness of the distribution in comparison with the normal distribution. The excess error is 0.48, the value < 2, therefore the distribution can be considered normal.

To quantitatively assess the effectiveness of state programs to support entrepreneurship in the context of foreign economic sanctions in 2019, we will conduct an econometric analysis based on the indicators of small and medium-sized entrepreneurship activity in 2020 (the number of small and medium-sized enterprises and the number of people employed in entrepreneurship). The allocated financial resources under federal and regional programs to support entrepreneurship («My Business – Self-Employed», «Social Entrepreneurship»). One subject – Moscow — was excluded from the analysis, as there is no funding for this subject.

The volumes of financial resources under federal and regional programs of entrepreneurship support were used as factor attributes:

X1 – volume of implementation of the program to support small and medium-sized businesses, as well as individuals applying a special tax regime "Tax on professional income" for their accelerated development in single-industry towns;

X2 – the volume of implementation of the program to ensure access of small and medium-sized businesses to export support;

X3 – volume of implementation of the federal project «Popularization of Entrepreneurship»;

X4 – volume of implementation of the program of special tax regime «Tax on professional income» in the centers «My Business»;

X5 – volume of implementation of the program of the state (municipal) microfinance organization;

X6 – volume of implementation of the program of regional guarantee organizations;

X7 – volume of implementation of the program «Acceleration of small and medium-sized enterprises».

Let us calculate the correlation coefficients (closeness of connection) between Y and factor attributes using the «STATISTICA» program (see Table 2).

Table 2: Indicators of correlation between Y and factor traits.

	Y	X1	X2	X3	X4	X5	X6
Y	1,00						
X1	0,01	1,00					
X2	0,16	0,38	1,00				
X3	0,50	0,22	0,69	1,00			
X4	0,36	0,25	0,75	**0,93**	1,00		
X5	0,07	0,29	0,20	0,05	0,12	1,00	
X6	0,13	0,07	0,22	0,33	0,42	0,44	1,00
X7	0,08	0,38	0,45	0,35	0,41	0,08	0,12

Source: compiled by the authors.

According to the results of correlation analysis, multicollinearity between factors X3 and X4 is observed. Since the factor X4 is more strongly correlated with other factor attributes, it is necessary to exclude it from further econometric analysis. Let us evaluate the indicators when excluding factor X4 (see Table 3).

Table 3: Correlation indices between Y and factor traits without factor X4.

	Y	X1	X2	X3	X5	X6
Y	1,00					
X1	0,07	1,00				
X2	**0,52**	0,37	1,00			
X3	**0,90**	0,21	0,69	1,00		
X5	0,02	0,28	0,19	0,04	1,00	
X6	0,26	0,07	0,22	0,33	0,44	1,00
X7	0,27	0,37	0,44	0,34	0,07	0,11

Source: compiled by the authors.

According to the results of the second correlation analysis, we can conclude that there is no multicollinearity between the factor variables. Let us assess the closeness of the relationship between the resultant and factor characteristics: the greatest impact on the number of small and medium-sized enterprises is exerted by the programs of the federal project «Popularization of Entrepreneurship» (X3) and providing access to export support (X2), while the programs of special tax regime (X1) and «Acceleration of small and medium-sized enterprises» (X7) have an insignificant impact.

To quantify the impact of the volume of financing under foreign economic sanctions of state programs on the number of small and medium-sized enterprises in the Russian Federation, we consider the following multiple regression models:

- linear;
- stepwise;
- exponential;
- hyperbolic.

Each model will be evaluated according to the indicators:

- correlation index;
- mean relative error;
- coefficient of determination;
- Fisher's F-criterion;
- parameters by Student's t-criterion and p-value.

The results of the linear model are presented in Table 4.

Table 4: Results of the linear regression model.

Indicators	Free component	X1	X2	X3	X5	X6	X7
Coefficients	57976,96	-0,10	-1,72	7,67	-0,02	-0,05	-0,01
Standard error	23021,54	0,27	0,75	1,43	0,13	0,18	0,06
t-statistic	2,52	-0,38	-2,27	5,36	-0,17	-0,25	-0,15
P-value	0,01	0,70	0,03	0,00	0,87	0,80	0,88
Multiple R	0,561						
R-square	0,315						
F-criterion	5,99						
Standard error	85704,602						

Source: compiled by the authors.

The correlation between the resultant and the selected factors is significant according to the F-criterion. The coefficient of determination shows that the share of variation of the dependent variable is due to the variation of the explanatory variables by 31.5%. The free term, X1, X5, X6 and X7 are insignificant by t-criterion and p-value.

The results of linear and nonlinear models modelling are presented in the summary Table 5.

Table 5: Summary of modelling results.

Model	R	R-squared	F
Linear	0,56	0,31	5,99
Hyperbolic	0,47	0,22	3,83
Indicative	0,67	0,55	16,45
Stepped	0,75	0,56	51,41

Source: compiled by the authors.

According to the results of modelling, we can conclude that the degree model best describes the relationship between the resultant and factor attributes. However, the correlation and determination indices show a significant influence of unaccounted factors, which are associated with the uneven distribution of the initial resultant attribute. In this regard, it is necessary to identify clusters by small and medium-sized enterprises of the initial statistical population. We can distinguish 3 groups of regions with different numbers of small and medium-sized enterprises according to the Y indicator: 1 cluster 0-100000; 2 cluster 100000-200000; 3 cluster more than 200 000.

Let us introduce dummy variables for 1 and 3 clusters of the distribution of Russian regions by the number of small and medium-sized enterprises. Let us consider ANCOVA – a model that will contain both quantitative and qualitative variables. Let us introduce 2 dummy variables: Z1 (=1 for subjects of cluster 1, 0 –otherwise). Z2 (=1 for subjects of cluster 3, 0 – otherwise).

Thus, the model with initial quantitative (factor) signs and dummy variables will have the following form:

$$\hat{y} = a + \sum_{i=1}^{n} bixi + g_1 z_1 + g_2 z_2 + e$$

where y is the number of small and medium-sized enterprises in the i-th constituent entity of the Russian Federation, xi is the amount of funding for small and medium-sized entrepreneurship support programs, zi – is dummy variables.

Then private regression equations for individual clusters are formed:

-for regions of cluster 2:

$\hat{y} = a + \sum_{i=1}^{n} bixi \ (z_1 = z_2 = 0)$;

-for regions of cluster 1:

$\hat{y} = (a + g_1) + \sum_{i=1}^{n} bixi \ (z_1 = 1, z_2 = 0)$;

-for regions of cluster 3:

$\hat{y} = (a + g_2) + \sum_{i=1}^{n} bixi \ (z_1 = 1, z_2 = 1)$.

The basic value of the qualitative variable is the value

«2 clusters», g_1, g_2 are differential free terms.

Let us consider two types of models: linear and steppe models. The programs of implementation of the federal project «Popularization of Entrepreneurship» (X3) and access to export support (X2) are selected as factor attributes.

The results of the linear model with dummy variables are presented in Table 6.

Table 6: Results of linear regression model with dummy variables.

Indicators	X2	X3	Z1	Z2
Coefficients	0,21	4,96	-495,15	49935,89
Standard error	0,18	0,69	293,65	14805,38
t-statistic	2,45	7,13	2,76	3,37
P-value	0,02	0,00	0,01	0,00
Multiple R	0,93			
R-square	0,87			
F-criterion	144,33			
Standard error	32378,97			

Source: compiled by the authors.

The results of the modelling illustrate the increase in the quality of the model after the introduction of dummy variables that take into account the unevenness of the resultant sign. The correlation coefficient increased to 0.93. The coefficient of determination shows that the share of variation of the dependent variable is due to the variation of the explanatory variables by 87%. The model is significant by Fisher's F-criterion (calculated value is higher than the tabulated value at 95% probability level), also all parameters are significant by Student's t-criterion and p-value.

The obtained linear multiple regression model:

$$\hat{y} = 0{,}21x_2 + 4{,}96x_3 - 495z_1 + 49936z_2 + e$$

It can be concluded that an increase in the financing of small and medium-sized enterprises under the program to provide access to export support by 1 thousand rubles will lead to an increase in the number of small and medium-sized enterprises by 0.21 units. An increase in the financing of small and medium-sized enterprises under the program for the implementation of the federal project «Popularization of Entrepreneurship» will lead to an increase in the number of small and medium-sized enterprises by 4.96 units. At the same time, the number of small and medium-sized enterprises of the 1st cluster is 495 units lower than the number of small and medium-sized enterprises of the 2nd cluster. The number of small and medium-sized enterprises of the 3rd cluster is on average 49,336 units higher than the number of small and medium-sized enterprises of the 2nd cluster.

To assess the elasticity of the influence of factor characteristics on the resultant one, we construct a step model with dummy variables (see Table 7).

Table 7: Results of a stepwise regression model with dummy variables.

Indicators	X2	X3	Z1	Z2
Coefficients	0,29	0,94	-523	46784
Standard error	0,11	0,09	236,43	15060,6
t-statistic	2,45	10,75	3,1	4,21
P-value	0,002	0,00	0,01	0,00
Multiple R	0,99			
R-square	0,99			
F-criterion	6503,31			
Standard error	0,455			

Source: compiled by the authors.

The simulation results illustrate the better quality of the steppe model compared to the linear model. The correlation coefficient increased to 0.99. The coefficient of determination shows that the share of variation of the dependent variable is due to the variation of the explanatory variables by 99%. The model is significant by Fisher's F-criterion (calculated value is higher than the tabulated value at 95% probability level), also all parameters are significant by Student's t-criterion and p-value.

The obtained stepped multiple regression model:

$$\hat{y} = {x_2}^{0{,}29} + {x_3}^{0{,}94} - 523z_1 + 46784z_2 + e$$

It can be concluded that an increase in the financing of small and medium-sized enterprises under the program to provide access to export support by 1% will lead to an increase in the number of small and medium-sized enterprises by 0.29%. An increase in the financing of small and medium-sized enterprises under the program to implement the federal project «Popularization of Entrepreneurship» by 1% will lead to an increase in the number of small and medium-sized enterprises by 0.29% to 0.94%. At the same time, the number of small and medium-sized enterprises of the 1st cluster is on average 523 units lower than the number of small and medium-sized enterprises of the 2nd cluster. And the number of small and medium-sized enterprises of the 3rd cluster is, on average, 46784 units higher than the number of small and medium-sized enterprises of the 2nd cluster.

Further, to analyze the effectiveness of state programs to support entrepreneurship under foreign economic sanctions, conducted in 2021, let us consider the number of small and medium-sized enterprises (including newly created entities) in 2022 as a resultant attribute. Let us conduct descriptive statistics of the initial data of the resultant attribute for

2022. The results are presented in Table 8.

Table 8: Indicators of descriptive statistics on the number of small and medium-sized enterprises in the Russian Federation for 2022.

Indicators	Result
minimum	1453
maximum	389450
variation range	387997
average	41235.5
geometric mean	38017.20
median	41235.5
dispersion	4617441070
skewness	2.93
skewness error	0.27
excess	6.66
excess error	0.54
n	85

Source: compiled by the authors.

The minimum value was 1,453 units in Chukotka Autonomous region, which is 63 units higher than the figure for 2019. The maximum value is 389,450 units in Moscow, which is almost 2 times less than the 2019 quantity and 354,201 units in St. Petersburg. The variation spread is 387,997 units, which indicates an uneven distribution of small and medium-sized enterprises among the regions of the Russian Federation. Asymmetry is 2.93, which is > 0, hence the skewness of the series is right-sided. The error of asymmetry is 0.27 < 3, hence asymmetry is insignificant, and its presence is explained by the influence of random factors. The kurtosis is 6.66, which is greater than 0 and characterizes the relative sharpness of the distribution in comparison with the normal distribution. The excess error is 0.54, the value < 2, hence the distribution can be considered normal. In general, the distribution is characterized by less variability compared to 2019, which is associated with a sharp reduction in the maximum values, i.e., the largest number of small and medium-sized enterprises in the constituent entities of the Russian Federation.

In 2021, an additional measure to support small and medium-sized enterprises was introduced in the form of the «Social Entrepreneurship» program. Let us introduce the following indicators of the volume of funding of programs for 2021 as factor attributes:

X1 – the volume of implementation of the program to support small and medium-sized businesses, as well as individuals applying a special tax regime «Professional Income Tax" for their accelerated development in single-industry towns;

X2 – the volume of implementation of the program to ensure access of small and medium-sized businesses to export support;

X3 – volume of implementation of the federal project «Popularization of Entrepreneurship»;

X4 – volume of implementation of the program of special tax regime «Tax on professional income», in the centers «My Business»;

X5 – volume of implementation of the program of the state (municipal) microfinance organization;

X6 – volume of implementation of the program of regional guarantee organizations;

X7 – volume of implementation of the program «Acceleration of small and medium-sized enterprises»;

X8 – volume of implementation of the program «Social Entrepreneurship».

Let's calculate the correlation coefficients (closeness of connection) between Y and factor attributes (see Table 9).

Table 9: Correlation indices between Y for 2022 and factor attributes for 2021.

	Y	X1	X2	X3	X4	X5	X6
Y	1,00						
X1	0,08	1,00					
X2	0,49	0,38	1,00				
X3	0,81	0,20	0,68	1,00			
X4	0,79	0,24	0,77	**0,91**	1,00		
X5	0,67	0,29	0,72	0,79	**0,84**	1,00	
X6	0,26	0,07	0,27	0,31	0,42	0,32	1,00
X7	0,35	0,06	0,45	0,42	0,49	0,47	0,18
X8	0,40	0,16	0,32	0,47	0,41	0,39	0,08

Source: compiled by the authors.

According to the results of correlation analysis, multicollinearity between programs X3, X5 and X4 is observed. Since the factor X4 is more strongly correlated with other factor attributes, it is necessary to exclude it from further econometric analysis. Let us evaluate the indicators when excluding the factor X4 (see Table 10).

Table 10: Correlation indices between Y and factor traits without factor X4.

	Y	X1	X2	X3	X5	X6	X7
Y	1						
X1	0,08	1,00					
X2	0,49	0,38	1,00				
X3	0,81	0,20	0,68	1,00			
X5	0,67	0,29	0,72	0,76	1,00		
X6	0,26	0,07	0,27	0,31	0,32	1,00	
X7	0,35	0,06	0,45	0,42	0,47	0,18	1,00
X8	0,40	0,16	0,32	0,47	0,39	0,08	0,21

Source: compiled by the authors.

According to the results of the second correlation analysis, we can conclude that there is no multicollinearity between the factor attributes, but there is a fairly high correlation between the programs X2, X3 and X5. The greatest influence on the number of small and medium-sized enterprises in 2022 is exerted by the programs of the federal project «Popularization of Entrepreneurship» (X3) and state (municipal) microfinance organization (X5), while the programs «Professional Income Tax» (X1) and programs of regional guarantee organizations (X6) have an insignificant influence.

To quantify the impact of the volume of financing of state programs in 2021 on the number of small and medium-sized enterprises in the Russian Federation in 2022, multiple regression models were built: linear, steppe, exponential and hyperbolic. The results of modelling of linear and nonlinear models are presented in the summary Table 11.

Table 11: Summary of modelling results.

Model	R	R- squared	F
Linear	0,88	0,77	52,08
Hyperbolic	0,81	0,65	9,33
Indicative	0,71	0,50	23,39
Stepped	0,32	0,10	77

Source: compiled by the authors.

According to the results of modelling, we can conclude that the step model also best describes the relationship between the resultant and factor attributes. However, the determination indices show the influence of unaccounted factors, which are associated with the uneven distribution of the initial resultant attribute. In this regard, clusters of small and medium-sized enterprises of the initial statistical population by the indicator Y were identified: 1 cluster 0-50000; 2 cluster 50000-100000; 3 cluster includes values over 100 000.

We introduced dummy variables: Z1 (=1 for subjects of cluster 1, 0 — otherwise). Z2 (=1 for subjects of cluster 3, 0 -otherwise) and built ANCOVA — a model that contains both quantitative and qualitative variables. X2, X3, X7 and X8 are selected as quantitative factors that have the greatest influence on the resultant attribute.

A linear multiple regression model with dummy variables:

$$\hat{y} = 0{,}12x_2 + 7{,}47x_3 + 0{,}09x_7 + 0{,}11x_8 - 3368z_1 + 72696z_2 + e$$

The correlation coefficient was 0.91. The coefficient of determination shows that the share of variation of the dependent variable is due to the variation of the explanatory variables by 83%. The model is significant by Fisher's F-criterion (calculated value is higher than the tabulated value at 95% probability level), also all parameters are significant by Student's t-criterion and p-value.

It can be concluded that the impact of the program of financing small and medium-sized enterprises to provide access to export support decreased and the impact of the program of the federal project «Popularization of Entrepreneurship» increased. So at increase in volume of financing under the program X3 on 1 thousand roubles will lead to growth of quantity of subjects of small and average business on the average of 7,47 units. At the same time, programs X7 and X8 also became significant, but with a smaller share of impact.

To assess the elasticity of the influence of factor characteristics on the resultant one, a stepwise multiple regression model was constructed:

$$\hat{y} = 8{,}965{x_2}^{0{,}435} + {x_3}^{0{,}99} + {x_7}^{0{,}156} + {x_8}^{0{,}245} + e$$

The correlation coefficient was 0.91. The coefficient of determination shows that the share of variation of the dependent variable is due to the variation of the explanatory variables by 83%. The model is significant according to Fisher's F-criterion (the calculated value is higher than the tabulated value at a probability level of 95%), and all parameters are also significant according to Student's t-criterion and p-value.

It can be concluded that an increase in funding for small and medium-sized enterprises under the program to provide access to export support by 1% will lead to an increase in the number of small and medium-sized enterprises by 0.42%. An increase in funding for small and medium-sized enterprises under the program to implement the federal project «Popularization of Entrepreneurship» by 1% will lead to an increase in the number of small and medium-sized enterprises by 0.42% to 0.99%. At the same time, a 1% increase in the amount of funding under the program «Acceleration of small and medium-sized enterprises» will lead to an increase in the number of small and medium-sized enterprises by 0.156%, and an increase in funding under the program «Social Entrepreneurship» by 0.245%.

4 CONCLUSIONS

Government measures to develop small and medium-sized enterprises play an important role in creating a favorable environment for entrepreneurship, stimulating innovation, improving competitiveness and promoting economic growth. However, in the context of foreign economic sanctions, these measures may face additional challenges and constraints, making it more difficult to support small and medium-sized enterprises.

Sanctions imposed by countries against other states have a serious impact on the economic development of the latter. Under the conditions of foreign economic sanctions imposed on the Russian Federation, the development of small and medium-sized enterprises as one of the key sectors of the economy is of particular importance.

The econometric analysis of the effectiveness of government measures (allocated financial resources under the federal and regional programs to support entrepreneurship «My Business», «Social Entrepreneurship», «Export Support Centers», «Monocities», «Microfinance Institutions», «Promotion of Entrepreneurship», etc.) for the development of small and medium-sized enterprises in the context of foreign economic sanctions in the dynamics from 2019 to 2022 showed that in 2020, the greatest impact on the number of small and medium-sized entrepreneurship entities was made by the programs of the federal project «Promotion of Entrepreneurship» and state (municipal) microfinance institutions. In 2022, the programs of the federal project «Popularization of Entrepreneurship» and state (municipal) microfinance organizations had the greatest impact on the number of small and medium-sized enterprises, while the programs «Professional Income Tax» and programs of regional guarantee organizations had an insignificant impact.

The data obtained as a result of the study correspond to the results previously obtained by the authors (Korobov S.A., Moseiko V.O., Korobova S.I., 2022; Korobov S.A., Epinina V.S., Usacheva I.V., Moseiko V.O., 2023) and confirm the importance in the conditions of foreign economic sanctions of expanding the access of small and medium-sized businesses to financial resources through the priority implementation of state support programs for entrepreneurship, primarily «Popularization of entrepreneurship».

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REFERENCES

Aliev, O.M., Ibragimova, D.M., 2022. Problems of the Russian economy in the context of sanctions and special operations. Economics and Entrepreneurship, 8, 129-136.

Antyushin, M.V., Guskova, I.V., Serebrovskaya, N.E., 2022. Factor analysis of the functioning of small businesses and their development prospects under sanctions. Entrepreneur's Guide, 15(2), 35-43.

Bagheri, S., Akbarpour, H.R., 2016. Reinvestigation of the West's Sanctions against Russia in the Crisis of Ukraine and Russia's Reaction. Procedia Economics and Finance, 36, 89-95.

Bezugly, E.A., Tkachenko, V.V., Mikhailikov, V.L., 2022. Measures of state support for Russian entrepreneurship under sanctions. State and municipal administration. Scientific notes, 3, 92-97.

Chevalier, M., 2023. International sanctions enacted against Russia as overriding mandatory rules – on which foot should international arbitrators stand? Journal of International Dispute Settlement.

Du, X., Wang, Z., 2022. Multinationals, global value chains, and the welfare impacts of economic sanctions. Economics Letters, 220, 110870.

Ermolov, N.S., 2022. Preferential lending to small and medium-sized businesses as a measure of financial support in the context of international sanctions. Banking Law, 3, 7-13.

Felbermayr, G., Morgan, T.C., Syropoulosc, C., Yotov, Y.V., 2021. Understanding economic sanctions: Interdisciplinary perspectives on theory and evidence. European Economic Review, 135, 103720.

Gurash, S.V., 2022. Institutional model for supporting Russian entrepreneurship under sanctions. Economics: yesterday, today, tomorrow, 12(5A), 39-45.

Ivanov, O.B., Buchwald, E.M., 2022. Sanctions and countermeasures in the Russian economy (regional aspect). Stage: economic theory, analysis, practice, 4, 7-27.

Kolchugina, A.V., 2022. Small and medium-sized businesses under sanctions. Scienceosphere, 9(2), 174-180.

Korobov, S.A., Epinina, V.S., Usacheva, I.V., Moseiko, V.O., 2023. Regional business management in the context of foreign economic sanctions: online survey methodology. E3S Web of Conferences 403, 08018.

Korobov, S.A., Moseiko, V.O., Korobova, S.I., 2022. State development of entrepreneurship in the Volgograd region in the context of external sanctions: a resource-based approach. Bulletin of Volgograd State University. Economy, 24(2), 111-122.

Levkina, N.N., 2022. The main problems of small businesses in the context of new sanctions against the Russian Federation. Research and development. Economy, 10(4), 47-52.

Moteng, G., Njangang, H., Nvuh-Njoya, Y., Ndeffo Nembot, L., 2023. International sanctions and economic complexity in developing countries. Revue d'Economie Politique, Vol.133, №3, 409-452.

Nguyen, T.T., Do, M.H., 2021. Impact of economic sanctions and counter-sanctions on the Russian Federation's trade. Economic Analysis and Policy, 71, 267-278.

Sedrakyan, G.S., 2022. Ukraine war-induced sanctions against Russia: Consequences on transition economies. Journal of Policy Modeling, 44(5), 863-885.

Shipova, E., 2023. International organizations' role in sanctions in Russia-Ukraine crisis: participants or observers? East European and Balkan Institute, T.47, №2, 163-191.