

Development of a Methodology for Assessing the Performance of Financial Mechanisms to Support SMEs

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Abstract: The purpose of the study was to develop a methodology for assessing the performance of financial mechanisms to support small and medium-sized businesses based on the analysis of statistical data. The authors proposed the use of a composite index, which allows to assess the effect of the implemented mechanisms in three aspects: the quality of the entrepreneurial environment development, budget efficiency and the impact on the labor market. Each aspect was assessed based on a set of macroeconomic indicators that form the corresponding evaluation index. The final assessment was carried out using a composite index, which includes an integral index of the quality of development of small and medium-sized businesses, an integral index of the efficiency of the use of state budget resources, an integral index of social efficiency of small and medium-sized businesses. The results of the study allow us to draw conclusions about the connection between individual measures of financial support and their impact on the quality of the business environment.

1 INTRODUCTION

Support for SMEs is a priority of the state economic policy (Franquesa, Vera, Kakembo, Abduh, Salleh, Mendy, Mittal, Raman, 2021).

As of December 01, 2019, the number of SMEs, information about which is contained in the Unified Register, is 5.9 million units (-118.2 thousand or -2% to the same date in 2018): 2.5 million legal entities (-183.5 thousand or -6.8% relative to 2018) (hereinafter also - "LE") and 3.4 million individual entrepreneurs (+65.3 thousand or + 2.0% by 2018) (hereinafter also - "IE") (42.5% and 57.5% of the total number of SMEs, respectively).

The majority of SMEs is engaged in services and trade (80.0%). At the same time, over the period 2016-2019, there is an increase in the service sector with a simultaneous reduction in the trade sector. So, if, according to the Unified Register, as of December 01, 2016, 40.6% of the total number of SMEs were engaged in trade, and 39.9% - in the service sector, then as of December 01, 2019, the share of SMEs

engaged in trade amounted to 37.6%, in the service sector - to 42.4%.

The largest number of SMEs is concentrated in Moscow and St. Petersburg, as well as in the Moscow, Sverdlovsk regions and Krasnodar Territory, the smallest - in the Chukotka, Nenets and Jewish Autonomous Districts.

When evaluating the distribution of funds from the federal budget and the budget of Moscow in dynamics (Rudenko, 2021), we can note an increase in concentration on a limited number of more priority measures of financial support for SMEs in Moscow, the total amount of funding for which is growing every year.

Nevertheless, there are a number of issues despite the growth of financing for small and medium-sized businesses.

In particular, there is no clear understanding of how much and in what areas funds are spent to support SMEs (Bykova, Rudenko, 2019). State structures are not able to track and summarize data on the number and volume of financial support measures in the Russian Federation (Rudenko, 2021).

Table 1: Source data for determining the integral quality index of the development of SMEs in Moscow for the period 2016–2019

No.	Indicators	Calculation method	2015	2016	2017	2018	2019
Source data							
The number of enterprises and organizations, units			1009747	1010064	1039834	1045258	1094198
Number of SMEs, units			320160	324254	355350	385029	529221
SME turnover, RUB bln			4533.75	4460.28	4492.83	4618.38	2909.04
Average headcount of SME employees (excluding external part-time workers), thousand people			226.7	229.6	229.1	226.6	292.8
Population, thousand people			12463	12468	12471	12470	12472
Calculation parameters							
1	Number of SMEs per 100 thousand people of population	Number of SMEs / population (in thousand persons)	25.689	26.007	28.494	30.876	42.433
2	Share of SMEs in the total number of enterprises	Number of SMEs / Number of enterprises and organizations	0.317	0.321	0.342	0.368	0.484
3	The volume of SMEs turnover per person employed by SMEs	SME turnover / Average headcount of people employed in SMEs	19.999	19.426	19.611	20.381	9.935
Indexes							
i_{11}	Index of change in the number of SMEs per 100 thousand people of the population	The number of SMEs per 100 thousand people of the population _t / The number of SMEs per 100 thousand people of the population _{t-1}	-	1.012	1.096	1.084	1.374
i_{12}	Index of change in the share of SMEs in the total number of enterprises	The share of SMEs in the total number of enterprises _t / The share of SMEs in the total number of enterprises _{t-1}	-	1.012	1.065	1.078	1.313
i_{13}	Index of change in the volume of turnover per one person employed in SME	The volume of turnover per one person employed in SME _t / The volume of turnover per one person employed in SME _{t-1}	-	0.984	1.007	1.028	0.630
I_{OD}	Integral index of quality of development of SMEs	$\sqrt[3]{i_{11} * i_{12} * i_{13}}$	-	1.003	1.055	1.063	1.044

2 MATERIALS AND METHODS

The study consists in analyzing key macroeconomic indicators of a small and medium-sized business entity, reflecting the quality of the business environment, government spending on financing various forms of support for small and medium-sized entrepreneurs, as well as changes in the labor market among those employed in small and medium-sized businesses.

An integral assessment based on indices was carried out to assess the effectiveness of the implemented financial mechanisms of small and medium-sized entrepreneurs

3 RESULTS AND DISCUSSION

One of the methods for assessing the performance of SME support policy is an integral assessment based on indices [2, 6]. Based on the available statistical

data, it is proposed to establish a composite index based on three integral indices: an integral index of the quality of SME development, an integral index of the efficiency of using budget resources, and an integral index of social efficiency of SMEs.

1. The initial data for calculating the Moscow SME development quality index are shown in Table 1.

The results of calculating the integral quality index of the development of SMEs in Moscow and its components are presented in Figure 1.

The graphic interpretation of the analysis results allows us to state the presence of positive changes in the sphere of SMEs in Moscow from 2015 to 2019. At the same time, however, despite the increase in the indices of change in the number of SMEs per 100 thousand of the population and the change in the share of SMEs in the total number of enterprises, the drop in the index of change in the volume of turnover per person employed by SMEs led to a decrease in the integral index of the quality of SME development by

10% in 2019 compared to 2018. This indicates a decline in the quality of SME development in Moscow under the influence of macroeconomic factors, which led to a significant reduction in the turnover of SMEs in 2019 (– 37% compared to the previous year), and the need to review the policy of state support.

The source data for calculating the resource efficiency index of the Moscow budget are presented in Table 2. The results of the calculation of the integrated index of budget resource use efficiency in Moscow and components thereof are shown in Figure 2.

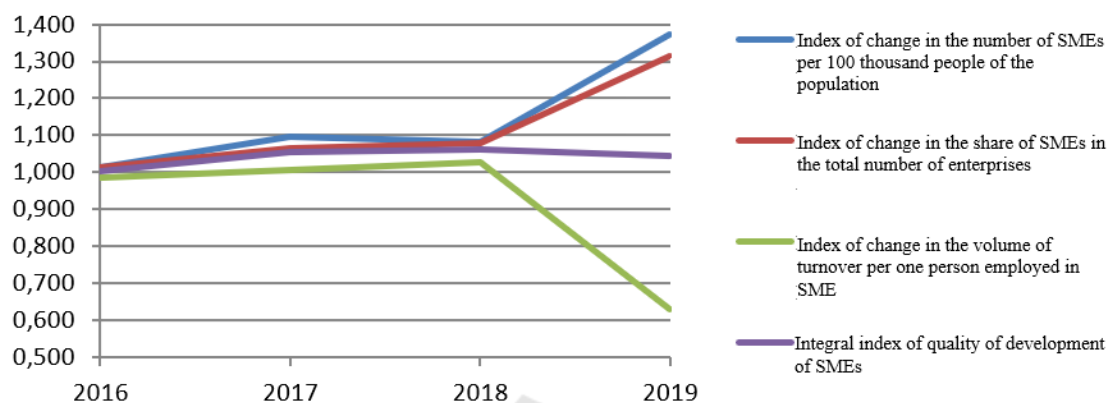


Figure 1: Integral quality index of development of SMEs in Moscow for the period 2016–2019 and its components.

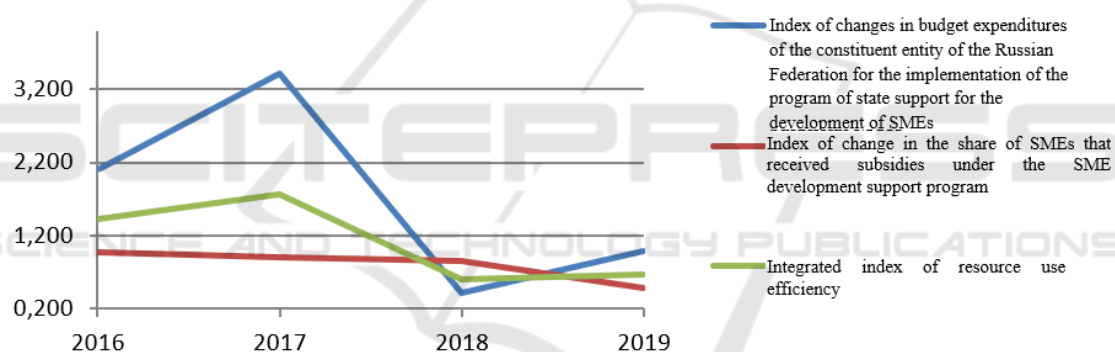


Figure 2: Integrated index of budget resource use efficiency in Moscow and components thereof for the period 2015–2019.

Table 3: Sources and volumes of SME development support programs in Moscow in 2016–2019, in thousand rubles

Funding sources	Funding volumes			
	2016	2017	2018	2019
Total budgetary allocations, including	1291680	4404040	1803200	1681760
regional budget funds	460000	926440	460000	443440
federal budget funds	831680	3477600	1343200	1238320

Table 4. Source data for calculation of the integrated index of budget resource use efficiency in Moscow for the period 2016-2019 (with the author's adjustments for the amount of funding for the SME development support programs in Moscow in 2017)

No.	Indicators	Calculation method	2015	2016	2017	2018	2019
Source data							
Amount of financing of the state program for the development of SMEs, thousand rubles			617320	1291680	2898000	1803200	1681760
Indexes							
i21	Index of changes in budget expenditures of the constituent entity of the Russian Federation for the implementation of the program of state support for the development of SMEs			2.0924	1.1660	1.1973	0.9327
i22	Index of change in the share of SMEs that received subsidies under the SME development support program			0.9776	0.9034	0.8577	0.4745
IRUE	Integrated index of resource use efficiency			1.4302	1.0263	1.0134	0.6652

The analysis findings show that there is no general trend in the effective use of budget funds to support the development of SMEs. A significant increase in the index of changes in budget expenditures occurred in 2017 and, as a result, increase of the integral index, followed by an even sharper decline in 2018 (the drop in the integral index in 2018 compared to 2017 was 66%) and a slight improvement in the index value in 2019. This is due to significant changes in the amount of funding for SME development support programs

Table 3 presents the distribution of funding volumes depending on funding sources.

An analysis of the volume of budget funding and the direction of program expenditures suggests that an increase in funding from the regional budget in 2017 (by 457,240 thousand rubles compared to the previous year) and from the federal budget (by 2,645,920 rubles (more than 3 times)) is associated with funding within the SME support program of the Moscow Fund for Assistance to Lending to Small

Entrepreneurship (457,240 thousand rubles were allocated for its development in 2017 from the regional budget and 2,645,920 thousand rubles - from the federal budget). Thus, most of the expenses for the support and development of SMEs in Moscow in 2017 are related to the funding of the Fund's work.

Since the allocation of such a large amount of financial resources is a one-time event, it causes a little distortion in the results of constructing the integral index. Accordingly, it would be useful to compare the previously obtained data with the results that can be obtained from the analysis without the amount of funds for one-time funding of the Fund (namely, 579,600 thousand rubles from the regional budget and 2,318,400 thousand rubles from the federal budget, i.e. 2,898,000 thousand rubles in 2013). The results of the calculation of the integral index of resource efficiency are presented in Table 4 and Figure 3.

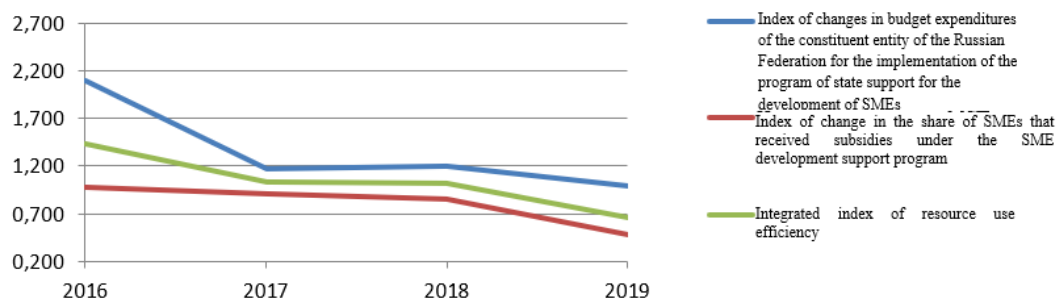


Figure 3. Source data for calculation of the integrated index of budget resource use efficiency in Moscow and components thereof for the period 2016-2019 (with the author's adjustments for the amount of funding for the SME development support programs in Moscow in 2017)

Table 5. Source data for determining the social efficiency index of the development of SMEs in Moscow for the period 2016–2019.

No.	Indicators	Calculation method	2015	2016	2017	2018	2019
Source data							
Number of SMEs, units			320160	324254	355350	385029	529221
Average headcount of SME employees (excluding external part-time workers), thousand people			2086	2112	2108	2085	2694
Average annual number of employed people, thousand people			15443	15391	15337	15281	15158
Average monthly wages of SME employees, thousand rubles			36.6	39	42.3	47.4	46.2
Average monthly wages per employee, thousand rubles			60.06	67.5	76.95	83.04	88.92
Calculation parameters							
1	Share of people employed in SMEs in the total number of employees	The average number of employees in SME / Total average number of employees	0.1351	0.1372	0.1374	0.1364	0.1777
2	Social attractiveness of SMEs	Average monthly salary of SME employees / Average monthly salary in the economy	0.6095	0.5778	0.5497	0.5708	0.5195
Indexes							
i ₃₁	Index of change in the share of people employed in SMEs from the total number of employees	Share of people employed in SMEs from the total number of employees _t / Share of people employed in SMEs from the total number of employees _{t-1}		1.0162	1.0013	0.9927	1.3027
I ₃₂	Index of change in the coefficient of social attractiveness of SMEs	Social attractiveness of SMEs _t / Social attractiveness of SMEs _{t-1}		0.9479	0.9514	1.0383	0.9102
ISE	Integral index of social efficiency of SMEs	$\sqrt{i_{31} * i_{32}}$		0.9942	0.9649	0.9844	1.0960

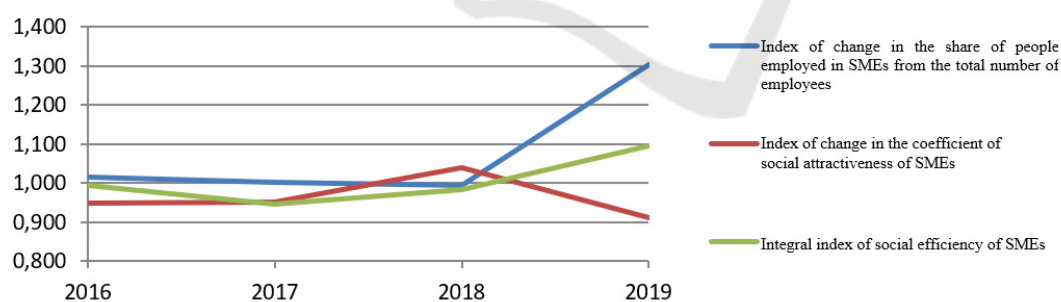


Figure 4: Integral quality index of development of SMEs in Moscow and components thereof for the period 2016–2019

Table 6. Results of calculations of integral and composite indices characterizing the quality of development, social efficiency, and resource efficiency within the SME state support policy in Moscow for the period 2016-2019.

Indicator	Designation	2016	2017	2018	2019
Integral index of quality of development of SMEs	$I_{\text{КР}}$	1.003	1.055	1.063	1.044
Integrated index of resource use efficiency	$I_{\text{ЭИР}}$	1.4302	1.0263	1.0134	0.6652
Integral index of social efficiency of SMEs	$I_{\text{СЭ}}$	0.9942	0.9649	0.9844	1.0960
Composite index of the effectiveness of the SME state support policy	$I_{\text{СВОДН}}$	1.1256	1.0147	1.0198	0.9130

Thus, without considering the funding of the Moscow Fund for Assistance to Lending to Small Entrepreneurship, but taking into account only the activities of the authorities related to financial, property, and information support of SMEs, we can obviously note the negative dynamics of the change in the integral index. This fact underlines the expediency of spending budget funds not only on traditional types of state support for SMEs, but also on infrastructure facilities for supporting SMEs, the funding of which contributes to improving the values of the integral index of budget efficiency.

The initial data for calculating the social efficiency index of the Moscow SMEs are presented in Table 5, and the results are shown in Figure 20.

In general, we can consider the dynamics of changes in the integral index of social efficiency of SMEs in Moscow for the period 2016–2019 as positive, which is primarily due to the stable growth in the number of SMEs and average wages (until 2018). Separately, we should consider the results of the construction of the integral index in 2019: a significant increase in the number of employees of SMEs (by 29.2% compared to 2018) was a key factor in improving the integral index.

However, we should note that the index of changes in the coefficient of social attractiveness fell significantly, which is due to the manifestation of inconsistency in the change in wages in small enterprises and in the economy as a whole: while the average monthly salary in the region increased (by 7% compared to 2018), in SMEs – decreased (by 2.5 %). This indicates a high sensitivity of SMEs to economic shocks. The manifestation of this kind of phenomena in combination with a relatively small level of the integral rating (for all years (except for 2019) below 1) is the basis for strengthening and/or revising the policy of state support for SMEs in Moscow. Based on the constructed integral indices, the composite index (Table 6) can be calculated using the formula:

$$I_{\text{сводн}} = \sqrt[3]{I_{\text{КР}} \cdot I_{\text{ЭИР}} \cdot I_{\text{СЭ}}} \quad (1)$$

4 CONCLUSIONS

Based on the data obtained, we can conclude that there is insufficient consistency in the changes in the integral indices, which indirectly indicates that there is quite a small connection between the use of resources within the SME state support policy and the quality of SME development and its social attractiveness in Moscow in the period 2016-2019.

Due to the fact that currently, state bodies refuse to directly subsidize the costs of SMEs in favor of creating an institutional environment for expanding the access of SMEs to financial resources, the author analyzed the activities of the regions of the Russian Federation to create and improve the work of microfinance organizations that provide loans to SMEs, and developed a system of proposals for the development of the Moscow microfinance organization established in 2019.

The areas of improvement of state support for SMEs in terms of microfinancing of SMEs are grouped as follows:

1) expansion of access for SMEs to the microfinance system (in particular, expansion of SMEs activities subject to microfinance and lending purposes; reduction of the minimum threshold value of the SMEs operation period (in order to involve start-up entrepreneurs); formation of infrastructure for access to microfinance, etc.);

2) expanding opportunities for SMEs, which receive funding (increasing the term, volume of loans, differentiation of loan products, the possibility of debt restructuring, etc.).

The author justified the expediency of increasing the maximum volume of microcredit to 3 million rubles and made a forecast, according to which the incorporation of the proposed recommendations in the activities of the microfinance organization of Moscow would improve the results of the implementation of the SME state support policy in the region.

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