# Support measures as a factor in managing the digitalization of small and medium-sized enterprises in the context of the green economy

*Ekaterina* Sheina[1,*], *Egor* Skvortsov[2], and *Ruslan* Batashev[2]

[1]Ural State University of Economics, 620144, Yekaterinburg, Russian Federation
[2]Ural State Forest Engineering University, 620100, Yekaterinburg, Russian Federation
[3]Kadyrov Chechen State University, Grozny, Russia

**Abstract.** The targeting and timeliness of financial and non-financial measures of state support for small and medium-sized enterprises in the field of agriculture within the framework of ongoing state support for entrepreneurship in the Russian Federation are currently crucial not only for a specific industry, but also for the national economy of the country as a whole, as they minimize the risks associated with the specifics of the activities of these enterprises, and make it possible to redistribute the resources released as a result of the support received to enhance the digitalization of business processes. The authors investigated the results of providing financial and non–financial support to SMEs in the Sverdlovsk region, including in the field of agriculture, received from the regional Development Institute of the Sverdlovsk region for the period from 2021 to 2023. The conclusions obtained by the authors showed the need to strengthen measures to support small and medium-sized enterprises in the field of agriculture by the state through regional development institutions, which will ensure the growth and scaling of their business and allow for a more comprehensive implementation of digitalization processes in business planning and operational management of enterprises.

## 1 Introduction

Agriculture, as one of the strategically important sectors of the national economy of any country, contributes not only to the uninterrupted provision of food security and technological sovereignty of the state, but also to achieving the results of such national development goals as increasing the life expectancy of the nation, improving demography, promoting employment, establishing successful entrepreneurship and strengthening the ability of small and medium-sized enterprises, not only carrying out their activities in the field of agriculture, to the growth and scaling of business [1, 2].

Agricultural goods are specific, depending on seasonality and demand, perishable, bulky, and vulnerable to external environmental factors [3], which significantly distinguishes them from industrial goods. Due to their specific characteristics listed above, state support for small and medium-sized enterprises in agriculture becomes important and necessary, in many

* Corresponding author: sheinaeg@usue.ru

ways allowing to competently accumulate the released monetary resources of enterprises and timely direct them to the digital development of internal business processes [4], thus forming new digital models by applying scenario modeling methods in the field of agricultural entrepreneurship [5, 6].

## 2 Materials and Methods

The theoretical and methodological basis of the author's research is based on the postulates of the entrepreneurship theory and the public and municipal management theory in combination with elements of a program-oriented approach.

In the course of the research, the authors used methods of generalization, as well as statistical and comparative analysis.

The authors base their research on a hypothesis that suggests a certain relationship between quantitative indicators of state support measures by regional institutions for the development of small and medium-sized enterprises operating in the field of agriculture, their ability to scale business and digital development of business processes.

State support for agriculture around the world has traditionally been developing in three directions for many years: consulting support for the process of creating and functioning business entities, providing financial support and providing microloans and loans on preferential terms to enhance the availability of concessional credit resources, providing support and promotion to export-oriented farmers [7, 8].

The main areas of state support for agriculture include the following:

— ensuring the availability of credit resources;
— support for agricultural producers among small and medium-sized businesses;
— improving food safety;
— provision of consulting and information support;
— additional resources and support, including grant support for agricultural producers.

Considering measures of state support for the agricultural sector in various countries, special attention should be paid to the export trend of subsidies, the significant predominance of "green support for farmers" compared to other support measures and budget expenditures on domestic food assistance to the population, which may be especially important for entrepreneurs in small municipalities [9].

The level of automation and digitalization of the agricultural sector is one of the most important indicators of the level of general technical progress development in the national economy as a whole and determines the level of technological sovereignty of the agricultural sector [10].

The sphere of agriculture in the subjects of the Russian Federation is in an uneven state of functioning and is characterized by dependence on the climatic conditions of each specific region, as well as on state support in general, which causes the difficulty of transferring this sphere to self-sufficiency and difficulty in developing new individual forms of management, such as self-employed citizens [11].

In accordance with the regulatory documents, five levels of digital maturity of an enterprise or the maturity of its digital transformation are summarized: the introduction of digital solutions, the digitalization of individual departments, the modernization of digital infrastructure, the digitalization of individual business processes, and the introduction of new digital business models that allow both going beyond the agricultural sector and ensuring the ability to small or medium-sized enterprises to scale, that is, to a qualitative transition from one category of small and medium-sized enterprises in the interpretation of Federal Law No. 209-FZ "On the development of Small and Medium-sized Enterprises in the Russian

Federation" [12] to another and a gradual transition beyond small and medium-sized enterprises into the category of SMEs+.

Given the insufficiently high level of digital transformation in the entire agricultural sector in the Russian Federation at the moment, we can talk about the first level of digital maturity, which is characterized by the point-to-point implementation of individual digital solutions in the activities of enterprises without the availability of an integrated system for digitalizing their business processes, which indicates the need to increase targeted government support measures aimed at solving operational tasks of these enterprises and allowing to accumulate free resources to direct them to the development of digitalization of these enterprises.

## 3 Results and Discussion

State support for small and medium-sized enterprises in the Russian Federation, including SMEs engaged in activities in the field of agriculture, is currently being implemented within the framework of the national project of the Russian Federation "Small and medium-sized entrepreneurship and support for individual entrepreneurial initiative". The main areas of support for this national project are such as the provision of preferential microloans at the key rate of the Bank of Russia by regional development institutions – state microfinance organizations, as well as the provision of comprehensive services and support for export-oriented agricultural producers.

The authors analyzed the quantitative indicators provided by the regional institute for the development of financial and non-financial measures to support small and medium-sized enterprises of the Sverdlovsk region in general (Figure 1) and those operating in the field of agriculture in particular (Figure 2).

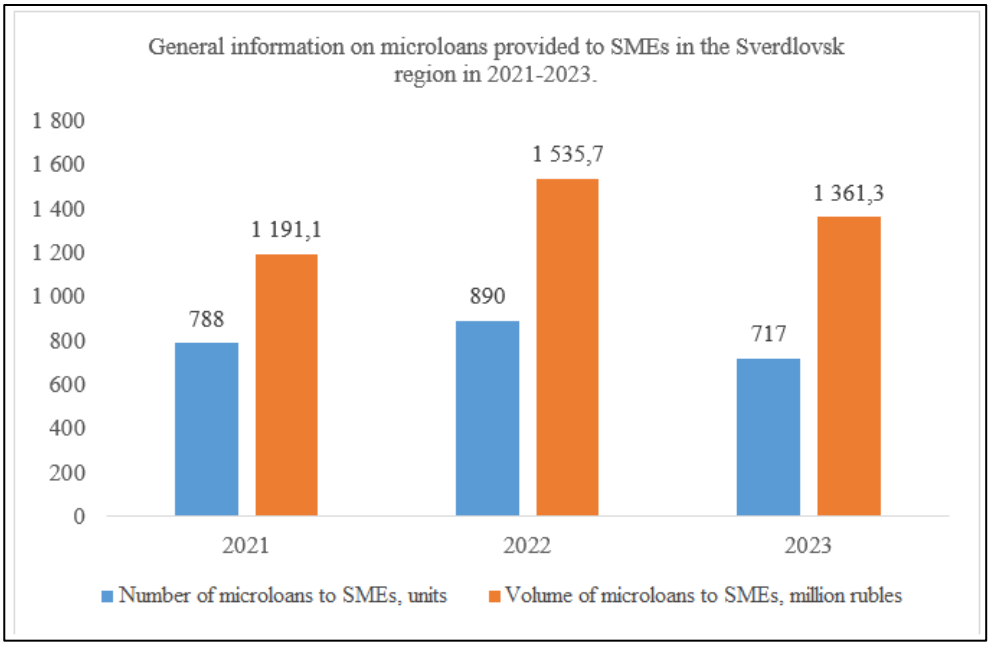


**Fig. 1.** The results of providing microloans to SMEs in 2021-2023. [compiled by the authors here and further on: [13]].

Figure 1 shows data on the number and volume of microloans at a preferential interest rate issued to small and medium-sized enterprises of the Sverdlovsk region in 2021-2023 in the field of business support. Due to the systematic decrease in financing from the state, it can be stated that there is no growth in the portfolio of microloans to small and medium-sized enterprises in the region, which complicates their access to preferential credit "short" resources for the implementation of entrepreneurial activities.

Figure 2 shows data on the number and volume of microloans issued to small and medium–sized enterprises of the Sverdlovsk region in 2021-2023, operating in the field of agriculture, including novice farmers operating for no more than two years.

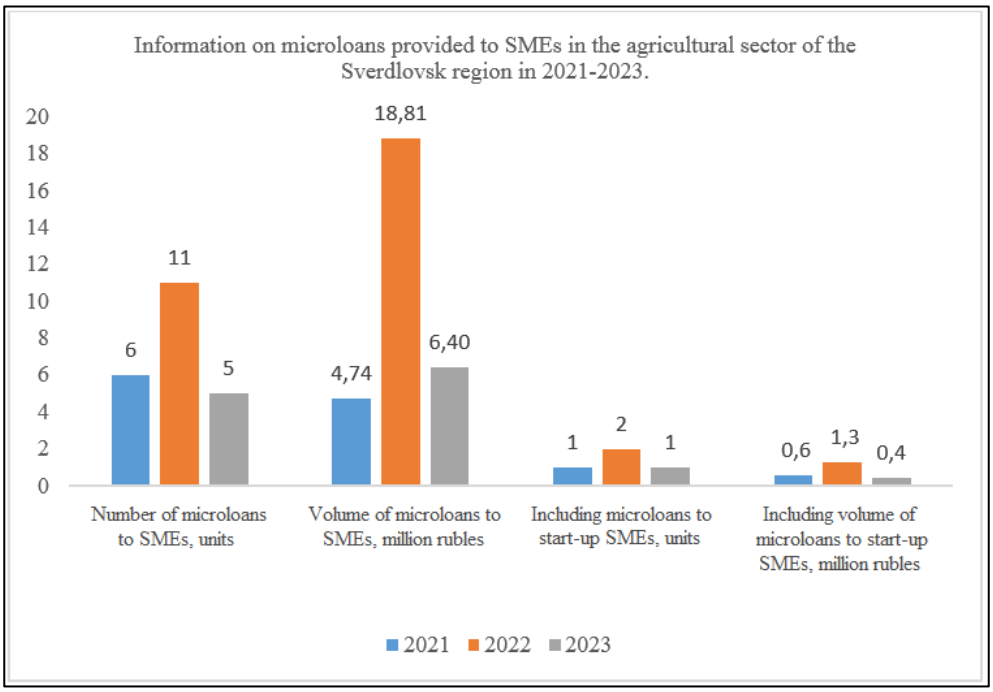


**Fig. 2.** The results of providing microloans to SMEs in the field of agriculture in 2021-2023 [compiled by the authors according to: [13]].

According to Figure 2, it can be concluded that in 2023, compared with 2022, preferential credit resources for small and medium-sized agricultural enterprises within the framework of the ongoing national project of the Russian Federation in the field of business support, especially critical indicators for start-up small and medium-sized agricultural enterprises. The financial support provided to them during 2021-2023 can be characterized as targeted, isolated, and unable to resolve issues of growth and acceleration of start-ups in the field of agriculture.

The presence of a tendency to a shortage of preferential borrowed resources for entrepreneurs of the Sverdlovsk region in the field of agriculture forms an excess of demand over supply, which is reflected in an increase in underfunding of both the current activities of SMEs in the region, which can lead to an increase in arrears on mandatory current payments and salaries of employees, and to restrictions on participation in long-term investment projects [14], which will complicate strategic business development, equipment modernization, and slow down the processes of digitalization of small and medium-sized enterprises in the field of agriculture.

Figure 3 shows data on quantitative indicators of non-financial support measures, such as integrated services and export support, provided to small and medium-sized enterprises of the Sverdlovsk region in 2021-2023, operating in the field of agriculture.

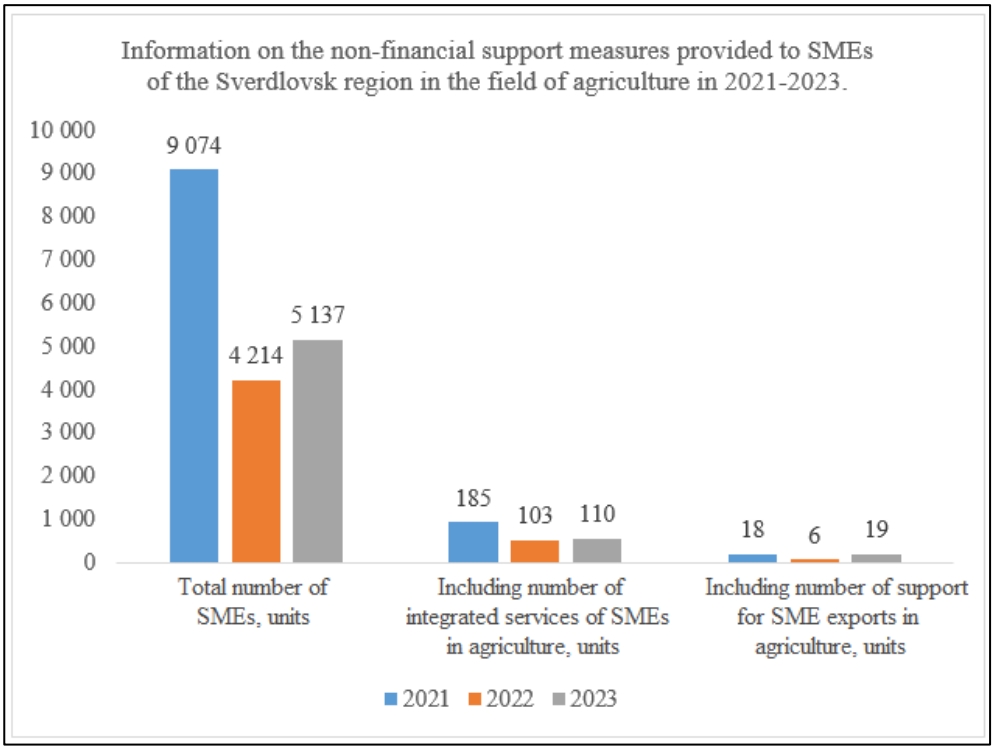


**Fig. 3.** The results of providing non-financial support measures to SMEs in the field of agriculture in 2021-2023. [compiled by the authors according to: [13]].

According to Figure 3, in 2021, only 9,074 small and medium-sized enterprises received consulting, educational and other non-financial state support, as well as services from the export support center of the Sverdlovsk region, of which only 185 SMEs in the field of agriculture received support in the form of integrated services and 18 SMEs received export support.

In 2022, 4,214 small and medium-sized enterprises received non-financial state support measures in the Sverdlovsk region, of which 103 SMEs in the field of agriculture received support in the form of integrated services and 18 SMEs in the field of agriculture received support from the export center.

In 2023, 5,137 small and medium-sized enterprises of the Sverdlovsk region became recipients of non-financial state support measures, of which only 110 SMEs in the field of agriculture received support in the form of integrated services and 19 SMEs in the field of agriculture received support from the export center.

Thus, over the period 2021-2023, the number of small and medium-sized enterprises in the field of agriculture that received financial and non-financial support is insignificant in the total share of recipients of support in the region, which does not allow these entities to fully qualitatively establish operational management of business processes at the enterprise and carry out a systematic transition to the next level of digital maturity.

Digitalization of business processes at small and medium-sized enterprises in the field of agriculture will successfully establish a performance management system at enterprises

(Table 1), which includes a set of performance indicators, stages of their implementation, monitoring and control, a reward system, as well as persons responsible for setting these processes, which will stabilize the business as a whole and to reduce the impact of such negative factors as seasonality and irregularity of financial flows in small and medium-sized enterprises in the field of agriculture.

**Table 1.** Performance management system for small and medium-sized enterprises in the field of agriculture with increased digitalization of business processes [compiled by the authors].

| Name of the KPI | Goal system | KPI location | Control measures | Reward system | Person in charge |
|---|---|---|---|---|---|
| Assessment of the increase in profits due to the digital growth of the enterprise | Contribution to the implementation of strategic goals | Increasing efficiency | Frequency 1 time per year | Financial incentives through the KPI system | Business owner |
| Assessment of changes in operating expenses in the total share of enterprise expenses from the introduction of new business models | Contribution to the implementation of strategic goals | Increasing efficiency | | | Business owner or hired director |
| Volume of digitalized business processes in operational management | High-quality digital transformation of business processes | Supporting functions | | | Responsible for the functional areas of the enterprise |

## 4 Conclusion

As a result of the author's research, it is appropriate to note that small and medium-sized businesses operating in the field of agriculture, receiving timely financial and non-financial measures of state support, have the opportunity to solve the current problems of their business and scale up, which will allow, without prejudice to current activities, accumulate the released monetary resources and direct their activities to create fundamentally new digital business models that meet the requirements of rapidly changing environmental conditions.

Summarizing the above, it is necessary to assess that the current level of digital security and maturity of small and medium-sized enterprises in the field of agriculture in the Russian Federation is not high enough and requires special approaches aimed at achieving specific results of the introduction of information and communication technologies. According to L.A. Golovina, M.M. Kislitsky, "in the agricultural sector, the use of digital technologies at the present stage allows for a competitive advantage associated with cost reduction in the context of lower prices in the global agri-food market" [5].

It should also be noted that the agricultural sector needs to accelerate its adoption of the path of digitalization to fully realize its economic potential, which will contribute to the overall steady growth of the country's economy and the scaling of small and medium-sized businesses among agro-industrial enterprises.

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