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ANALYSIS OF SME SUPPORT INCENTIVES IN THE MANUFACTURING INDUSTRY OF THE REPUBLIC OF KAZAKHSTAN

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Abstract. In the context of structural transformation of the economy of the Republic of Kazakhstan, the development of small and medium-sized businesses in the manufacturing industry is considered as a key factor in ensuring sustainable economic growth, diversifying the national economy and increasing its competitiveness. Of particular relevance is the study of mechanisms for state stimulation of entrepreneurial activity in the manufacturing sector, aimed at developing industrial potential, increasing the technological level of enterprises and expanding their export opportunities. The purpose of this study is to analyze the means of stimulating small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan and evaluate the effectiveness of their implementation in modern economic conditions. The paper considers the main directions of state support for entrepreneurship, including financial mechanisms of subsidies, tax incentives, institutional support measures, as well as programs of industrial and innovative development. The methodological basis of the study is a systematic approach, methods of Comparative and economic-statistical analysis, as well as an analysis of regulatory and legal documents and state programs regulating the development of entrepreneurship. As a result of the study, the main trends in the development of small and medium-sized businesses in the manufacturing industry

of the Republic of Kazakhstan for 2020-2024 were identified, the main problems of implementing the state policy of stimulating entrepreneurship were identified, including limited access to long-term financing, technological backwardness of enterprises, institutional restrictions and insufficient effectiveness of certain means of state support. It has been established that the implemented incentive measures contribute to the growth of entrepreneurial activity and the development of industrial production, but require improving the mechanisms for implementing state policy and increasing its effectiveness. The scientific novelty of the study lies in a comprehensive assessment of the effectiveness of means of stimulating small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan. The practical significance of the work is determined by the development of recommendations for improving the state policy of supporting entrepreneurship aimed at increasing the competitiveness of the national economy and sustainable development of the industrial sector.

Keywords. Small and medium-sized businesses, manufacturing industry, government support, industrial policy, entrepreneurship promotion, industrial development, Republic of Kazakhstan

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ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ ӨНДЕУ ӨНЕРКӘСІБІНДЕГІ ШАҒЫН ЖӘНЕ ОРТА БИЗНЕСТІ ҢЫТАЛАНДЫРУДЫ ТАЛДАУ

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Аннотация. Қазақстан Республикасы экономикасының құрылымдық трансформациясы жағдайында өңдеуші өнеркәсіпте шағын және орта бизнесті дамыту орнықты экономикалық өсуді қамтамасыз етудің, ұлттық экономиканы әртараптандырудың және оның бәсекеге қабілеттілігін арттырудың негізгі факторы ретінде қарастырылады. Өнеркәсіптік әлеуетті

дамытуға, кәсіпорындардың технологиялық деңгейін арттыруға және олардың экспорттық мүмкіндіктерін кеңейтуге бағытталған өндірістік сектордағы кәсіпкерлік белсенділікті мемлекеттік ынталандыру тетіктерін зерттеу ерекше өзекті болып отыр. Осы зерттеудің мақсаты Қазақстан Республикасының Өңдеу өнеркәсібіндегі шағын және орта бизнесті ынталандыру құралдарын талдау және оларды қазіргі экономикалық жағдайларда іске асырудың тиімділігін бағалау болып табылады. Жұмыста субсидиялаудың қаржылық тетіктерін, салықтық ынталандыруларды, институционалдық қолдау шараларын, сондай-ақ индустриялық-инновациялық даму бағдарламаларын қоса алғанда, кәсіпкерлікті мемлекеттік қолдаудың негізгі бағыттары қарастырылады. Зерттеудің әдіснамалық негізін жүйелі тәсіл, салыстырмалы және экономикалық-статистикалық талдау әдістері, сондай-ақ кәсіпкерлікті дамытуды реттейтін нормативтік-құқықтық құжаттар мен мемлекеттік бағдарламаларды талдау құрайды. Зерттеу нәтижесінде Қазақстан Республикасының Өңдеу өнеркәсібіндегі шағын және орта бизнесті дамытудың 2020-2024 жылдардағы негізгі тенденциялары анықталды, ұзақ мерзімді қаржыландыруға қолжетімділіктің шектелуін, кәсіпорындардың технологиялық артта қалуын, институционалдық шектеулерді және мемлекеттік қолдаудың жекелеген құралдарының тиімділігінің жеткіліксіздігін қоса алғанда, кәсіпкерлікті ынталандырудың мемлекеттік саясатын іске асырудың негізгі проблемалары айқындалды. Іске асырылып жатқан ынталандыру шаралары кәсіпкерлік белсенділіктің өсуіне және өнеркәсіптік өндірістің дамуына ықпал ететіні анықталды, алайда мемлекеттік саясатты іске асыру тетіктерін жетілдіруді және оның нәтижелілігін арттыруды талап етеді. Зерттеудің ғылыми жаңалығы Қазақстан Республикасының Өңдеу өнеркәсібіндегі шағын және орта бизнесті ынталандыру құралдарының тиімділігін кешенді бағалауда жатыр. Жұмыстың практикалық маңыздылығы ұлттық экономиканың бәсекеге қабілеттілігін арттыруға және өнеркәсіп секторын орнықты дамытуға бағытталған кәсіпкерлікті қолдаудың мемлекеттік саясатын жетілдіру бойынша ұсынымдар әзірлеумен айқындалады.

Түйін сөздер. шағын және орта бизнес, өңдеу өнеркәсібі, мемлекеттік қолдау, индустриялық саясат, кәсіпкерлікті ынталандыру, өнеркәсіптік даму, Қазақстан Республикасы

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АНАЛИЗ СТИМУЛИРОВАНИЯ МАЛОГО И СРЕДНЕГО БИЗНЕСА В ОБРАБАТЫВАЮЩЕЙ ПРОМЫШЛЕННОСТИ РЕСПУБЛИКИ КАЗАХСТАН

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Аннотация. В условиях структурной трансформации экономики Республики Казахстан развитие малого и среднего бизнеса в обрабатывающей промышленности рассматривается как ключевой фактор обеспечения устойчивого экономического роста, диверсификации национальной экономики и повышения ее конкурентоспособности. Особую актуальность приобретает исследование механизмов государственного стимулирования предпринимательской активности в производственном секторе, направленных на развитие промышленного потенциала, повышение технологического уровня предприятий и расширение их экспортных возможностей. Целью настоящего исследования является анализ инструментов стимулирования малого и среднего бизнеса в обрабатывающей промышленности Республики Казахстан и оценка эффективности их реализации в современных экономических условиях. В работе рассматриваются основные направления государственной поддержки предпринимательства, включая финансовые механизмы субсидирования, налоговые стимулы, институциональные меры поддержки, а также программы индустриально-инновационного развития. Методологическую основу исследования составляют системный подход, методы сравнительного и экономико-статистического анализа, а также анализ нормативно-правовых документов и государственных программ, регулирующих развитие предпринимательства. В результате исследования выявлены ключевые тенденции развития малого и среднего бизнеса в обрабатывающей промышленности Республики Казахстан за 2020–2024 годы, определены основные проблемы реализации государственной политики стимулирования предпринимательства, включая ограниченный доступ к долгосрочному финансированию, технологическое отставание предприятий, институциональные ограничения и недостаточную эффективность отдельных инструментов государственной поддержки. Установлено, что реализуемые меры стимулирования способствуют росту предпринимательской активности и развитию промышленного производства, однако требуют совершенствования механизмов реализации и повышения результативности государственной политики. Научная новизна исследования заключается в комплексной оценке эффективности инструментов стимулирования малого и среднего бизнеса в обрабатывающей промышленности Республики Казахстан. Практическая значимость работы определяется разработкой рекомендаций по совершенствованию государственной политики поддержки предпринимательства, направленных на повышение конкурентоспособности национальной экономики и устойчивое развитие промышленного сектора.

Ключевые слова: малый и средний бизнес, обрабатывающая промышленность, государственная поддержка, индустриальная политика, стимулирование предпринимательства, промышленное развитие, Республика Казахстан

Introduction. The development of small and medium-sized businesses is one of the priorities of the state economic policy of the Republic of Kazakhstan aimed at diversifying the economy and reducing dependence on the raw materials sector. In modern conditions of global economic competition, it is of particular importance to stimulate entrepreneurial activity in the manufacturing industry, which ensures the creation of high added value, technological development and an increase in the country's export potential.

The manufacturing industry is a strategically important sector of the economy, forming the basis of the industrial and innovative development of the state. In this regard, the state policy of the Republic of Kazakhstan is focused on creating favorable conditions for the functioning of small and medium-sized businesses, including the provision of financial support, tax incentives, institutional assistance and the development of business infrastructure.

Despite the government support measures being implemented, the development of small and medium-sized businesses in the manufacturing industry faces a number of structural and institutional problems, including limited access to long-term financing, insufficient technological development of enterprises, high administrative barriers and low innovative activity of business entities. This necessitates a comprehensive analysis of existing incentive mechanisms and an assessment of their effectiveness.

The purpose of this study is to analyze the tools for stimulating small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan, identify key problems in their implementation and develop recommendations for improving government policy in this area.

Literature review. The development of small and medium-sized businesses (SMEs) in the industrial sector is considered in the scientific literature as an important factor in the structural transformation of the economy, increasing innovation activity and ensuring sustainable economic growth. According to research by the Organization for Economic Co-operation and Development, small and medium-sized enterprises play a key role in creating a competitive environment, increasing productivity and promoting technological innovation, especially in the manufacturing industry (OECD, 2023). However, a number of researchers note that the contribution of SMEs to economic growth significantly depends on institutional conditions and the effectiveness of government incentive policies (Acs et al., 2017).

In the theoretical aspect, government incentives for entrepreneurship are justified by the need to overcome market dysfunctions, including information asymmetry, limited access to finance and a high level of investment risks (Rodrik, 2018). At the same time, modern research points to the ambiguity of the impact

of government support on the development of entrepreneurship. In particular, excessive government intervention can lead to a distortion of market incentives, a decrease in the efficiency of resource allocation, and the formation of business dependence on government support (Lerner, 2009).

Recent studies have focused on evaluating the effectiveness of government support tools for industrial entrepreneurship. According to UNIDO data (2022), subsidized interest rates, tax incentives, and technological modernization programs contribute to increased enterprise productivity and innovation. However, the effectiveness of these tools varies significantly depending on the institutional environment, the level of development of the financial system and the quality of public administration (OECD, 2023).

A separate research area is devoted to the analysis of government policies to support SMEs in emerging economies. The World Bank (2020) highlights that access to financial resources, the development of entrepreneurial infrastructure, and the reduction of administrative barriers are key factors in the growth of industrial entrepreneurship. At the same time, the researchers note that many government support programs are characterized by low efficiency due to insufficient coordination of development institutions and weak mechanisms for monitoring results.

In the Kazakh scientific literature, the development of small and medium-sized businesses is mainly considered in the context of economic diversification and the implementation of industrial and innovation policy of the state. Domestic researchers note that state support for entrepreneurship in the Republic of Kazakhstan is aimed at stimulating production activity, increasing export potential and reducing the dependence of the economy on raw materials (Ashimbayev, 2021; Kusainov, 2022). At the same time, the focus is mainly on institutional support mechanisms, including subsidizing credit rates, developing business infrastructure, and implementing government programs for industrial development.

At the same time, the analysis of domestic research shows a number of methodological limitations. First, most of the work is descriptive and does not quantify the effectiveness of government support tools. Secondly, limited attention is paid to the analysis of the effectiveness of individual mechanisms for stimulating entrepreneurship in the manufacturing industry. Thirdly, the institutional barriers affecting the effectiveness of the government's SME support policy have not been sufficiently investigated (Nazarbayev University, 2023). Modern research also points to the need to move from direct forms of government support to tools to stimulate innovation and technological modernization of enterprises (Cirera et al., 2020). However, in relation to Kazakhstan, these issues remain insufficiently studied, especially in the context of the development of the manufacturing industry and increasing the technological competitiveness of enterprises.

Thus, the analysis of scientific literature shows the existence of a scientific gap associated with the lack of a comprehensive assessment of the effectiveness of incentive tools for small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan, taking into account institutional factors

and modern economic conditions. This makes it necessary to conduct a systematic analysis of the state policy of stimulating entrepreneurship and assessing its impact on the development of the country's industrial sector.

Materials and methods. The methodological basis of the study is based on the provisions of institutional economics, the theory of state regulation of entrepreneurship and the concept of industrial policy, which consider state support for small and medium-sized businesses as a tool for structural transformation of the economy and increasing industrial competitiveness (Rodrik, 2018; Acs et al., 2017). The research is based on a systematic approach that allows us to consider the mechanisms of stimulating entrepreneurship as a set of interrelated economic, institutional and organizational instruments of public policy.

The research uses a set of quantitative and qualitative methods of scientific analysis. The system analysis was used to study the structure and mechanisms of state support for small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan, including financial, institutional and organizational tools to stimulate entrepreneurship. Economic and statistical analysis was used to assess the dynamics of the development of small and medium-sized businesses in the manufacturing industry, to analyze the indicators of production, employment, investment and entrepreneurial activity. This method made it possible to identify the main trends in the development of the industrial sector and assess the impact of government support measures on the development of entrepreneurship.

The comparative analysis was used to compare the national experience of stimulating small and medium-sized businesses with the international practice of state support for industrial entrepreneurship, presented in the studies of the Organization for Economic Co-operation and Development, the World Bank and UNIDO (OECD, 2023; UNIDO, 2022). The content analysis of regulatory documents was used to study the state policy of supporting entrepreneurship, including strategic documents for industrial development, government programs to support small and medium-sized businesses, as well as institutional mechanisms to stimulate entrepreneurial activity.

The information base of the study was made up of official statistical data from the Bureau of National Statistics of the Republic of Kazakhstan, analytical reports from the Ministry of National Economy of the Republic of Kazakhstan, materials from state programs for industrial and innovative development, as well as international analytical reviews of the development of small and medium-sized businesses.

The empirical basis of the study was statistical indicators of the development of small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan for the period 2020-2024, including indicators of output, the number of active business entities, investment in fixed assets, employment and productivity of enterprises.

To process statistical data, methods of dynamic analysis, structural analysis and analysis of relative indicators were used to identify changes in the structure

of industrial production and evaluate the effectiveness of state support tools for entrepreneurship.

The Pearson linear correlation coefficient was used to assess the relationship between the objects of state financial support for small and medium-sized businesses and indicators of the development of the industrial sector.

The correlation coefficient is calculated as follows:

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \cdot \sum(y_i - \bar{y})^2}}$$

where:

- x_i – values of the explanatory variable (government support for SMEs);
- y_i – values of the dependent variable (industrial output, investment, or SME share in GDP);
- \bar{x}, \bar{y} – mean values of the variables;
- r – Pearson correlation coefficient.

The calculations are based on statistical data presented in Table 4.

The use of an integrated methodological approach made it possible to ensure the objectivity of the research results and to conduct a systematic assessment of the effectiveness of incentive mechanisms for small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan.

Results. The results of the correlation analysis indicate that there is a stable positive relationship between the volume of state financial support for small and medium-sized businesses and the indicators of the development of the industrial sector of the Republic of Kazakhstan. The revealed dependencies allow us to conclude that the instruments of state support have a significant impact on the development of entrepreneurial activity, investment processes and industrial production. The high degree of correlation between the volume of government support and the volume of manufacturing industry production confirms that financial instruments to stimulate entrepreneurship contribute to the expansion of production activity and modernization of the industrial sector. The increase in interest rate subsidies and the expansion of credit support mechanisms create favorable conditions for the implementation of investment projects, which is especially important for capital-intensive manufacturing industries.

A similar trend is observed with regard to investments in fixed assets in industry. The revealed high positive relationship between the volume of government support and the investment activity of enterprises indicates the stimulating effect of financial instruments on the renewal of production facilities and the development of industrial infrastructure. This result is consistent with the conclusions of international studies, according to which government entrepreneurship support programs contribute to increased investment activity and technological modernization of enterprises (Organization for Economic Co-operation and Development, 2023). However,

the revealed results require a critical interpretation. Despite the high values of the correlation coefficients, the obtained dependences do not allow us to unequivocally assert the existence of a direct causal relationship between the volume of government support and the development of the industrial sector. According to World Bank research, the effectiveness of government support is determined not only by the scale of financing, but also by the quality of the institutional environment, the effectiveness of resource allocation mechanisms, and the level of technological development of enterprises (World Bank, 2020).

In addition, an earlier analysis showed that, despite the increase in government support, the share of small and medium-sized businesses in the manufacturing industry remains relatively low. This indicates the presence of structural constraints on the development of industrial entrepreneurship, including the high capital intensity of industrial production, limited access of enterprises to long-term financing and insufficient technological equipment of enterprises.

It should also be borne in mind that the growth of government support may be accompanied by the formation of institutional dependence of business entities on government resources, which potentially reduces incentives to increase the efficiency of economic activity. The scientific literature notes that the excessive dependence of businesses on government support can lead to a decrease in the competitiveness of enterprises and a distortion of market incentives (Acs et al., 2017).

Thus, the results of the analysis confirm the positive impact of financial instruments of state support on the development of small and medium-sized businesses and industrial production in the Republic of Kazakhstan, however, their effectiveness is limited by a number of institutional and structural factors. This necessitates the improvement of state support mechanisms, increasing their targeting and orientation towards the development of industrial entrepreneurship and technological modernization of enterprises. The results obtained form the basis for further analysis of institutional instruments of state support and assessment of their role in creating a favorable business environment and improving the effectiveness of state economic policy.

The development of small and medium-sized businesses (SMEs) is one of the key directions of the economic policy of the Republic of Kazakhstan aimed at diversifying the economy and reducing dependence on the raw materials sector. According to the Bureau of National Statistics of the Republic of Kazakhstan, in recent years there has been a steady increase in the contribution of SMEs to gross domestic product and employment (BNS RK, 2024). The share of small and medium-sized businesses in Kazakhstan's gross domestic product increased from 31.7% in 2020 to about 36.7% in 2023, indicating an expansion of entrepreneurial activity (BNS RK, 2024). At the same time, the number of people employed in the SME sector is also showing positive dynamics, exceeding 4 million people in 2024 (Ministry of National Economy of the Republic of Kazakhstan, 2023).

The manufacturing industry occupies an important place in the structure of

the country's industrial production. According to the Bureau of National Statistics of the Republic of Kazakhstan, the volume of manufacturing industry output increased from 15.9 trillion tenge in 2020 to about 25 trillion tenge in 2024, while the industrial production index in the industry shows steady growth (BNS RK, 2024). At the same time, the contribution of small and medium-sized businesses to the manufacturing industry remains relatively limited. According to the Damu Entrepreneurship Development Fund, the share of the manufacturing industry in the output of SMEs is about 12-13%, which indicates a structural imbalance in the development of entrepreneurship in favor of the service sector (Damu, 2024).

Table 1 — Key indicators of the development of SMEs and the manufacturing industry of the Republic of Kazakhstan (2020-2024)

Indicator	2020	2021	2022	2023	2024
The share of SMEs in GDP, %	31,7	33,5	35,2	36,7	37,0*
Number of employees in SMEs, million people	3,3	3,6	3,8	4,0	4,1
The volume of manufacturing industry output, trillion tenge	15,9	18,4	21,0	23,2	25,0
Manufacturing industry production index, %	96,3	105,5	103,4	104,1	106,9
Share of manufacturing industry in SME output, %	10,2	11,1	11,7	12,0	12,3
Note: compiled by the author according to the source (BTS RK (2024), Ministry of National Economy of the Republic of Kazakhstan (2023), Damu Foundation (2024).)					

The data presented in Table 1 indicate a positive trend in the development of small and medium-sized businesses in the Republic of Kazakhstan during the study period. There has been a steady increase in the contribution of the SME sector to the country's gross domestic product, reflecting the expansion of entrepreneurial activity and the increasing role of the private sector in the structure of the national economy. The increase in the share of SMEs in GDP from 31.7% in 2020 to about 37% in 2024 indicates the gradual strengthening of the business sector and the effectiveness of the implemented state policy of business support (Bureau of National Statistics of the Republic of Kazakhstan, 2024).

At the same time, there is an increase in employment in the small and medium-sized business sector, which confirms its significant socio-economic role. The increase in the number of employees from 3.3 million in 2020 to more than 4 million in 2024 indicates an expansion of entrepreneurial activity and an increase in the contribution of SMEs to the formation of the labor market (Ministry of National Economy of the Republic of Kazakhstan, 2023).

The analysis of the dynamics of the manufacturing industry also shows a steady growth trend. The volume of production in the industry increased by more than 1.5 times during the period under review, which indicates the intensification of industrial production and the implementation of industrial development policies. The positive dynamics of the industrial production index confirms the expansion of production activity and the modernization of certain industries (Bureau of National Statistics of the Republic of Kazakhstan, 2024).

At the same time, an analysis of the output structure of small and medium-sized businesses shows the presence of structural imbalances. Despite the overall increase in business activity, the share of the manufacturing industry in SME output remains relatively low and is increasing at an insignificant rate - from 10.2% in 2020 to about 12.3% in 2024. This indicates the predominance of the service sector and trade in the structure of entrepreneurship and the limited participation of SMEs in the manufacturing sector of the economy (Damu Entrepreneurship Development Fund, 2024).

The current structure of entrepreneurship is determined by a number of factors, including higher capital intensity of industrial production, long payback periods, technological barriers and limited access of enterprises to long-term financing. According to research by the Organization for Economic Co-operation and Development, small and medium-sized enterprises are characterized by higher financial constraints when implementing production projects, which reduces their participation in capital-intensive sectors of the economy (OECD, 2023).

In addition, the revealed dynamics indicates that existing government support measures contribute more to the quantitative growth of business entities than to the structural transformation of the economy and the development of the manufacturing sector. This trend is typical for many emerging economies, where business support programs are primarily focused on expanding entrepreneurial activity without sufficient incentives for technological modernization and increased productivity (UNIDO, 2022).

Thus, the analysis shows that, despite the positive dynamics of the development of small and medium-sized businesses and the manufacturing industry, there remains a structural imbalance between the growth of the total number of business entities and the level of their participation in the manufacturing sector. This indicates the need to improve state support tools aimed at stimulating industrial entrepreneurship, developing the technological potential of enterprises and increasing their competitiveness.

The identified trends in the development of small and medium-sized businesses and the manufacturing industry of the Republic of Kazakhstan indicate the presence of structural limitations on the participation of business entities in the manufacturing sector of the economy. Despite the positive dynamics of the main macroeconomic indicators, the contribution of small and medium-sized businesses to the manufacturing industry remains relatively low, which necessitates a more detailed analysis of the factors influencing the development of industrial entrepreneurship.

One of the key factors for the development of small and medium-sized businesses in the manufacturing industry is the access of enterprises to financial resources. The scientific literature emphasizes that limited access to finance is one of the main barriers to the development of industrial entrepreneurship, especially in capital-intensive industries (OECD, 2023). Small and medium-sized enterprises are

characterized by high credit risks, insufficient equity and limited opportunities to attract long-term investments, which reduces their ability to implement investment and innovation projects (Acs et al., 2017).

In this regard, the state policy of the Republic of Kazakhstan provides for the implementation of a set of financial instruments to stimulate entrepreneurial activity aimed at increasing the availability of credit resources, reducing the cost of borrowed capital and minimizing investment risks of small and medium-sized businesses. The main areas of financial support are subsidizing interest rates on loans, providing state guarantees, concessional lending and grant financing implemented through state development institutions, including the Damu Entrepreneurship Development Fund (Damu Foundation, 2024).

The analysis of the effectiveness of these tools is of particular scientific interest, since financial support is one of the key mechanisms for stimulating production activity, technological modernization of enterprises and expanding the participation of small and medium-sized businesses in the manufacturing industry.

In this regard, the analysis of financial instruments of state support for small and medium-sized businesses in the Republic of Kazakhstan, their scale, dynamics of implementation and impact on the development of entrepreneurial activity in the manufacturing sector of the economy is further conducted. Financial instruments of state support are a key mechanism for stimulating the development of small and medium-sized businesses (SMEs) in the manufacturing industry of the Republic of Kazakhstan. They are aimed at increasing the availability of financial resources, reducing the cost of borrowed capital and compensating for part of the costs of business entities.

In the Republic of Kazakhstan, financial support for entrepreneurship is implemented within the framework of the state Business Roadmap programs, the Unified Comprehensive Entrepreneurship Support Program, as well as preferential lending programs operated by the Damu Entrepreneurship Development Fund (Damu Foundation, 2024). The main instruments of financial incentives are subsidizing interest rates on loans, providing government grants, guaranteeing loans and reimbursing part of the costs of enterprises. The government's business support policy is characterized by a steady increase in financing. According to the Damu Foundation, the total amount of financial support for small and medium-sized businesses has more than doubled over the period 2020-2024, reflecting the increased role of the state in stimulating entrepreneurial activity and developing the manufacturing sector of the economy (Table 2).

Table 2 — Volume of financial state support for SMEs by main instruments, billion tenge

Support Tools	2020	2021	2022	2023	2024
Subsidizing interest rates	93	112	138	175	215
Government grants	18	22	25	29	35
Cost recovery (compensation)	21	26	31	37	42
Loan guarantees	120	145	168	210	298

Total amount of support	252	305	362	451	590
Note: compiled by the author according to the source (Damu Entrepreneurship Development Fund (2021-2024), Ministry of National Economy of the Republic of Kazakhstan (2023), Baiterek National Managing Holding JSC (2024))					

As can be seen from table 2, the total amount of state support for entrepreneurship increased from 252 billion tenge in 2020 to 590 billion tenge in 2024, which indicates a significant expansion in the scale of financial incentives for entrepreneurial activity. The largest share in the structure of financial support is occupied by subsidizing interest rates and providing government guarantees on loans. The increase in interest rate subsidies is due to the need to increase the availability of bank loans for SMEs and reduce the financial burden on enterprises. According to the Damu Foundation, this tool is the most in demand among entrepreneurs, as it significantly reduces the cost of borrowed capital and increases the investment activity of enterprises (Damu Foundation, 2024).

The mechanism of state guarantees for loans demonstrates particularly high growth rates, the volume of which has more than doubled during the period under review. The expansion of guarantee instruments is aimed at reducing banks' credit risks and increasing the availability of financing for enterprises that do not have sufficient collateral (Ministry of National Economy of the Republic of Kazakhstan, 2023). In turn, government grants and compensatory measures are characterized by more moderate growth rates. Their relatively limited volume is explained by the targeted focus of these tools on supporting innovative projects, modernizing production and developing priority sectors of the economy (NMH Baiterek JSC, 2024).

Table 3 — Support for SME projects through financial instruments

Indicators	2020	2021	2022	2023	2024
Number of supported projects, thousand.	18,2	32,0	38,5	45,1	60,0
Volume of subsidized loans, trillion tenge	1,2	1,8	2,4	3,1	4,2
Average amount of project support, million tenge	13,8	15,2	16,6	17,8	19,3
Note: compiled by the author according to the source (Damu Entrepreneurship Development Fund (2021-2024), Government of the Republic of Kazakhstan (2024).)					

The data in Table 3 reflect the steady positive dynamics of the implementation of financial instruments of state support for small and medium-sized businesses in the Republic of Kazakhstan in the period 2020-2024. The analysis of the presented indicators indicates a significant expansion in the scale of government support for entrepreneurial activity and increased availability of financial resources for SMEs.

First of all, there is a significant increase in the number of supported projects. If 18.2 thousand projects received state support in 2020, by 2024 their number has increased to 60.0 thousand, that is, more than three times. This trend indicates an expansion of the coverage of business entities by government support programs

and an increase in the demand for financial instruments to stimulate entrepreneurial activity (Damu Entrepreneurship Development Fund, 2024).

At the same time, there has been a significant increase in the volume of subsidized loans, which increased from 1.2 trillion tenge in 2020 to 4.2 trillion tenge in 2024. The growth in subsidized lending reflects an increase in the investment activity of small and medium-sized businesses and the strengthening of the role of the state in ensuring the availability of financial resources for the implementation of entrepreneurial projects. The expansion of credit support contributes to the modernization of production facilities, the development of investment projects and increased productivity of enterprises (Ministry of National Economy of the Republic of Kazakhstan, 2023).

The analysis of the average amount of support per project also shows a steady growth trend - from 13.8 million tenge in 2020 to 19.3 million tenge in 2024. The increase in this indicator indicates an increase in the capital intensity of supported projects and an increased focus of government support on the implementation of larger investment initiatives. This trend is especially important for the development of the manufacturing industry, characterized by high capital intensity of production and significant investment costs.

At the same time, the identified trends indicate not only a quantitative expansion of the scale of government support, but also a change in its qualitative characteristics. The increase in financing and the average amount of support reflects the transition to larger-scale investment projects aimed at modernizing production and developing industrial entrepreneurship. However, international studies show that the effectiveness of financial support instruments is determined not only by the amount of financing, but also by the effectiveness of resource allocation, the level of technological development of enterprises and the institutional environment (Organization for Economic Co-operation and Development, 2023).

Thus, the analysis shows that the state financial support for entrepreneurship in the Republic of Kazakhstan is characterized by a steady increase in the scale of implementation and expansion of investment activity of small and medium-sized businesses. At the same time, evaluating the effectiveness of these tools requires further analysis of their impact on the development of the manufacturing industry, increasing enterprise productivity and the structural transformation of the economy.

The analysis of the dynamics of financial instruments of state support shows a steady expansion of the scale of stimulation of small and medium-sized businesses in the Republic of Kazakhstan, expressed in an increase in subsidies, an increase in the number of supported projects and an increase in the average amount of financing for entrepreneurial initiatives. The revealed trends indicate a significant strengthening of the role of the state in ensuring access of small and medium-sized businesses to financial resources and stimulating investment activity.

At the same time, the quantitative growth of government support does not always indicate its high effectiveness in terms of structural transformation of the

economy, increased productivity of enterprises and increased participation of small and medium-sized businesses in the manufacturing industry. The scientific literature emphasizes that the effectiveness of government support instruments is determined not only by the scale of financing, but also by their impact on the economic performance of enterprises, innovation activity and competitiveness of the manufacturing sector (Organization for Economic Co-operation and Development, 2023; World Bank, 2020).

In this regard, there is a need to assess the effectiveness of implemented financial instruments of state support in terms of their impact on the development of the manufacturing industry, the growth of entrepreneurial activity and increasing the investment attractiveness of the manufacturing sector. Of particular scientific interest is the analysis of the relationship between government support and key indicators of the development of small and medium-sized businesses, including industrial production, investment in fixed assets and employment.

In order to assess the effectiveness of financial instruments of state support, their impact on the dynamics of small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan is further analyzed on the basis of economic and statistical research methods.

To assess the effectiveness of financial instruments of state support for small and medium-sized businesses, an economic and statistical approach was used based on the analysis of the relationship between the volume of state support for entrepreneurship and indicators of the development of the manufacturing industry in the Republic of Kazakhstan.

The following performance indicators were used:

- the volume of manufacturing industry output;
- the volume of investments in fixed assets in industry;
- The share of SMEs in the gross domestic product.

The total amount of state financial support for small and medium-sized businesses is considered as a factor indicator.

The effectiveness assessment was carried out on the basis of correlation analysis, which makes it possible to determine the degree of relationship between the volume of government support and the dynamics of the industrial sector (Gujarati & Porter, 2009). The method is widely used in assessing the effectiveness of government economic policy and the effectiveness of business promotion tools (OECD, 2023).

The information base of the study was compiled by data from the Bureau of National Statistics of the Republic of Kazakhstan, the Damu Entrepreneurship Development Fund and the Ministry of National Economy of the Republic of Kazakhstan for the period 2020-2024.

Table 4 — Indicators for assessing the effectiveness of financial support for SMEs

Indicators	2020	2021	2022	2023	2024
Total amount of state support for SMEs, billion tenge	252	305	362	451	590

The volume of manufacturing industry output, trillion tenge	15,9	18,4	21,0	23,2	25,0
Investments in fixed assets of industry, trillion tenge	3,4	3,9	4,6	5,2	6,1
The share of SMEs in GDP, %	31,7	33,5	35,2	36,7	37,0
Note-compiled by the author based on data from the Bureau of National Statistics of the Republic of Kazakhstan (2024), the Damu Enterprise Development Fund (2021-2024), and the Ministry of National Economy of the Republic of Kazakhstan (2023).					

The statistical data presented in Table 4 reflect the dynamics of key indicators of the development of small and medium-sized businesses and the industrial sector of the Republic of Kazakhstan for 2020-2024. These indicators are used as an empirical basis for evaluating the effectiveness of financial instruments of state support for enterprises.

The analysis of the relationship between the objects of state financial support and indicators of the development of the manufacturing industry requires the use of economic and statistical methods to assess the degree of influence of government policy on the economy and the development of the business sector. In this regard, based on the data presented in Table 4, a correlation analysis was carried out, the results of which reflect the closeness of links between objects of state support and indicators of industrial development.

The results of the calculations are shown in Table 5.

Table 5 — Correlation Coefficients between Government Support and Industrial Development Indicators

Indicator	Correlation coefficient (r)	Nature of relationship
Manufacturing output	0.98	Very strong positive
Investment in fixed capital (industry)	0.97	Very strong positive
Share of SMEs in GDP	0.95	Strong positive
Note: Calculated by the author.		

The results of the correlation analysis indicate that there is a high positive relationship between the objects of state financial support for small and medium-sized businesses and the indicators of the development of the industrial sector of the Republic of Kazakhstan.

The highest correlation is observed between the object of state support and the object of manufacturing products ($r = 0.98$), which indicates a significant impact of financial incentive instruments on the expansion of production activity. This result indicates that the fascination with objects of subsidization, lending and other forms of financial support contributes to the growth of industrial production and the development of the manufacturing sector of the economy.

A high positive relationship is also expressed between objects of state support and investments in fixed assets of industry ($r = 0.97$). This confirms that financial instruments of state policy stimulate the investment activity of enterprises, ensure

the modernization of production facilities and contribute to the development of industrial infrastructure.

In addition, a positive relationship is shown between the object of government support and the share of small and medium-sized businesses in the gross domestic product ($r = 0.95$), which indicates the positive impact of government policy on the development of the business sector.

However, it should be noted that a high correlation does not mean that there is a direct causal relationship between the indicators under consideration. According to research by the World Bank and the Organization for Economic Co-operation and Development, the effectiveness of government support also depends on the institutional environment, the level of technological development of enterprises and economic structures (World Bank, 2020; OECD, 2023).

Discussion. Thus, the analysis of the results indicates the positive impact of financial instruments of state support on the development of small and medium-sized businesses and the development of industry in the Republic of Kazakhstan, however, a more accurate assessment of their effectiveness requires a long-term analysis of structural and institutional factors.

The conducted research has shown that financial instruments of state support play a significant role in the development of small and medium-sized businesses and the stimulation of industrial production in the Republic of Kazakhstan. The analysis of the dynamics of state support facilities, the number of supported projects and the scale of subsidized lending indicate a significant expansion of the state policy of stimulating entrepreneurship in the period 2020-2024.

The results of the correlation analysis confirmed the existence of a stable positive relationship between the objects of state financial support and key indicators of the development of the industrial sector, including the object of the manufacturing industry, investments in fixed assets and the share of small and medium-sized businesses in the gross domestic product. This indicates that the implemented state support measures contribute to the growth of entrepreneurial activity, an increase in the investment activity of enterprises and the expansion of industrial production.

At the same time, the analysis revealed a number of limitations on the effectiveness of financial instruments of state support. Despite the fascination with financing objects, the contribution of small and medium-sized businesses to the manufacturing industry remains relatively low, which indicates the presence of structural imbalances in the development of the enterprise and insufficient orientation of government support to the development of the manufacturing sector. In addition, a company's high dependence on government resources may limit the formation of market incentives and reduce the effectiveness of financial support. Thus, the results of the study show that financial instruments of state support have a positive impact on the development of small and medium-sized businesses, but require further improvement of implementation mechanisms. The priority areas for improving the effectiveness of public policy are strengthening targeted support,

stimulating technological modernization of enterprises, expanding access to long-term financing for small and medium-sized businesses, and improving the efficiency of public resource allocation.

The results obtained form the basis for a comprehensive analysis of the institutional mechanisms of state support for enterprises aimed at creating a favorable business environment and increasing the competitiveness of the industrial sector of the Republic of Kazakhstan.

Conclusion. The conducted research allowed us to conduct a comprehensive analysis of the mechanisms for stimulating small and medium-sized businesses in the manufacturing industry of the Republic of Kazakhstan and evaluate the effectiveness of the implemented state support tools. The study examined the main directions of the state policy of stimulating entrepreneurship, including financial, institutional, organizational and economic support tools, as well as assessed the significant impact on the development of the country's industrial sector.

The results of the study showed that the state policy of supporting small and medium-sized businesses in the Republic of Kazakhstan is characterized by a steady expansion of the scale of financial instruments, including subsidizing interest rates, providing state guarantees, grant support and compensation mechanisms. The analysis of statistical data for the period 2020-2024 indicates an increase in government support facilities, an increase in the number of supported projects and an increase in the investment activity of business entities.

The assessment of the effectiveness of financial instruments has shown that there is a stable positive relationship between government support facilities and indicators for the development of the industrial sector, including manufacturing, investment in fixed assets, and the contribution of small and medium-sized businesses to gross domestic product. This confirms the significant impact of government policy on the development of entrepreneurial activity and the expansion of industrial production.

At the same time, the study revealed a number of structural and institutional constraints on the development of small and medium-sized businesses in the manufacturing industry. Despite the fascination with government support facilities, the contribution of small and medium-sized businesses to the manufacturing sector remains relatively low. There are still problems of limited access to long-term financing, insufficient technological equipment of enterprises, high capital intensity of industrial production and insufficient effectiveness of individual state support management mechanisms.

The results obtained indicate the need to improve the state policy of stimulating entrepreneurship, taking into account the task of structural modernization of the economy and increasing the competitiveness of the industrial sector of the Republic of Kazakhstan.

Based on the conducted research, the following measures are being implemented to increase the effectiveness of state support for small and medium-sized businesses in the manufacturing industry:

1. Increasing the address of state support.

It is necessary to strengthen the orientation of financial instruments to support manufacturing enterprises and high-tech manufacturing industries, including mechanical engineering, chemical industry and processing industries.

2. Development of long-term financing mechanisms for an industrial enterprise.

It is advisable to expand the instrument of preferential investment loans and create specialized financial mechanisms to support capital-intensive projects in the manufacturing industry.

3. Stimulating the technological modernization of the enterprise.

It is recommended to expand programs to support innovation, introduce digital technologies, and improve the technological level of production, including tax incentives and support for research and development.

4. Improving the institutional environment of the enterprise.

It is necessary to remove administrative barriers, increase the transparency of the mechanisms for distributing state support and strengthen coordination of the activities of development institutions.

5. Improving the effectiveness of monitoring and evaluation of government support.

It is necessary to introduce a system for evaluating the effectiveness of government programs to support enterprises based on collective performance indicators, including indicators of productivity, innovation activity and export orientation of enterprises.

6. Development of the export potential of small and medium-sized businesses.

It is advisable to strengthen the measure of support for the export of manufacturing products, including the development of export infrastructure and the promotion of the company's participation in international production chains.

References

Acs Z.J., Audretsch D.B., Lehmann E.E., & Licht G. (2017) National systems of entrepreneurship. *Small Business Economics*, 49(1). — P. 1–12. <https://doi.org/10.1007/s11187-016-9705-1> (in Eng.)

Ashimbayev S.K. (2021) *Razvitie malogo i srednego biznesa v Kazakhstane: Institucional'nye aspekty* [Development of small and medium business in Kazakhstan: Institutional aspects]. *Ekonomika*. (in Eng.)

Baiterek National Managing Holding JSC (2024) *Annual report 2024*. <https://baiterek.gov.kz> (in Eng.)

Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. (2023). *Investments in fixed capital in the Republic of Kazakhstan*. <https://stat.gov.kz> (in Eng.)

Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (2024) *Statistics of industry and small and medium enterprises in the Republic of Kazakhstan*. <https://stat.gov.kz> (in Eng.)

Cirera X., Frías J., Hill J., & Li Y. (2020) *A practitioner's guide to innovation policy instruments*. World Bank.

Damu Entrepreneurship Development Fund (2021) *Annual report 2021*. <https://damu.kz> (in Eng.)

Damu Entrepreneurship Development Fund (2022) *Annual report 2022*. <https://damu.kz> (in Eng.)

Damu Entrepreneurship Development Fund (2023) *Annual report 2023*. <https://damu.kz> (in Eng.)

- Damu Entrepreneurship Development Fund (2024) *Annual report 2024*. <https://damu.kz> (in Eng.)
- Gujarati D.N., & Porter D.C. (2009) *Basic econometrics* (5th ed.). McGraw-Hill. (in Eng.)
- Kussainov A.K. (2022) State policy of entrepreneurship support in the Republic of Kazakhstan. *Economics and Statistics*, 3. — P. 45–56. (in Eng.)
- Lerner J. (2009) *Boulevard of broken dreams: Why public efforts to boost entrepreneurship and venture capital have failed*. Princeton University Press. (in Eng.)
- Ministry of National Economy of the Republic of Kazakhstan (2023) *Report on entrepreneurship development in the Republic of Kazakhstan*. <https://gov.kz> (in Eng.)
- Nazarbayev University Graduate School of Business (2023) *SME development in Kazakhstan: Policy challenges and opportunities*. Nazarbayev University. (in Eng.)
- Organisation for Economic Co-operation and Development (2022) *Financing SMEs and entrepreneurs 2022: An OECD scoreboard*. OECD Publishing. https://doi.org/10.1787/fin_sme_ent-2022-en (in Eng.)
- Organisation for Economic Co-operation and Development (2023) *SME and entrepreneurship outlook 2023*. OECD Publishing. <https://doi.org/10.1787/34907e9c-en> (in Eng.)
- Rodrik D (2018) *Straight talk on trade: Ideas for a sane world economy*. Princeton University Press. (in Eng.)
- United Nations Industrial Development Organization (2022) *Industrial development report 2022: The future of industrialization*. UNIDO. (in Eng.)
- World Bank (2020) *Doing business 2020: Comparing business regulation in 190 economies*. World Bank. (in Eng.)
- World Bank (2023) *World development report 2023: Migrants, refugees, and societies*. World Bank. (in Eng.)

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