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ASSESSMENT OF THE EFFECTIVENESS OF GOVERNMENT SIEs FINANCING PROGRAMS IN THE REPUBLIC OF KAZAKHSTAN IN THE CONTEXT OF EXPORT PROMOTION

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Abstract. *Small innovative enterprises (SIEs) constitute a critical driver of Kazakhstan's economic transformation by promoting technological advancement and enabling the diversification and expansion of export-oriented sectors. In light of intensifying global competition and the nation's strategic orientation toward non-resource-based exports, evaluating the effectiveness of public financial support instruments targeting SIEs has become increasingly pertinent. This study provides a comprehensive assessment of current governmental support mechanisms, with particular attention to their influence on the export performance of small innovative enterprises between 2021 and 2024. Key financial tools under review include the "Innovation Grant", "Business Road Map", "Economy of Simple Things", and various subsidy programs administered through development institutions such as QazInnovations, DAMU, and Baiterek. Employing statistical methods, SWOT analysis, and elements of correlation analysis, the research identifies the nexus between public financing and export outcomes. The article offers policy-oriented recommendations aimed at refining financial instruments to better align with the challenges of international market expansion and at fostering institutional conditions conducive to the sustainable growth of export-driven innovation within the small business sector.*

Keywords: *small innovative enterprises, government support, export, financing, Kazakhstan, efficiency, innovative economy, QazInnovations, DAMU.*

Main provisions. Assessing the effectiveness of government financing programs on the export capacity of small innovative enterprises (SIEs) in Kazakhstan represents a crucial area of applied economic research, intersecting innovation policy and international trade development. Enhancing the export orientation of the national economy necessitates flexible, well-designed financial instruments that promote both innovation and global market integration. Although various support mechanisms – such as grants, subsidized loans, tax incentives, and export-related services – are in place, their impact remains limited due to institutional fragmentation, weak coordination between innovation and export agencies, and insufficient export preparedness among many SIEs. In the context of intensifying global competition and the digitalization of trade, there is a growing imperative to adopt more export-centric support models. These should integrate financial assistance with risk mitigation tools, expert advisory services, and a unified digital infrastructure to guide SIEs through the export process.

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Introduction. Small innovative enterprises (SIEs) are increasingly central to Kazakhstan's economic modernization, contributing to diversification, technological advancement, and the growth of value-added exports. As global competition intensifies and knowledge-based sectors expand, facilitating SIEs' access to international markets has become a strategic policy objective.

Despite the implementation of various financial and institutional support tools – such as innovation grants, concessional financing, accelerator programs, and advisory services – their overall impact on export performance remains limited. This raises concerns regarding the coherence and integration of innovation and export promotion strategies.

This study investigates the effects of public financial support on the export activity of SIEs in Kazakhstan between 2021 and 2024. Using regression and correlation analysis, along with SWOT and trend evaluations, the research assesses whether a significant link exists between public funding and export outcomes, while also identifying institutional factors that influence this relationship. The findings highlight both the achievements and gaps within current policy frameworks aimed at enhancing the export potential of innovation-driven enterprises.

Key Objectives of the Study:

1. To evaluate the alignment of current government financing programs for SIEs with national export promotion goals;
2. To examine the relationship between funding levels and export performance indicators;
3. To identify institutional and economic constraints hindering the internationalization of SIEs;
4. To compare the effectiveness of various support instruments;
5. To propose policy recommendations for enhancing government support with a stronger focus on export orientation.

Research Hypothesis. It is assumed that under the current level of institutional fragmentation of support programs and the limited diversity of instruments, the impact of government financial support on the export performance of small innovative enterprises (SIEs) remains unstable. The introduction of comprehensive export support, the expansion of targeted financing tools, and institutional coordination among programs will lead to increased export activity of SIEs and, consequently, to the strengthening of the national economy's export potential.

The results of the study may be utilized by:

1. Government bodies in the development and optimization of support programs for SIEs;
2. Financial institutions in evaluating the effectiveness of the instruments provided;
3. Export-oriented SIEs in selecting appropriate channels of government support;
4. Research centers and analysts in monitoring and forecasting the impact of the innovation sector on Kazakhstan's foreign trade dynamics.

Thus, the study contributes to the scientific and practical discourse on enhancing the effectiveness of public policy in the field of innovative entrepreneurship and the development of the country's export potential.

Literature review. Small innovative enterprises (SIEs) are widely recognized as integral components of national innovation systems, playing a crucial role in promoting economic diversification, enhancing technological competitiveness, and advancing a country's capacity for export-led growth. Scholarly research highlights their agility, rapid

assimilation of scientific advancements, and efficiency in translating research outputs into commercially viable products and services [1].

Academic studies emphasize that financial support for small innovative enterprises (SIEs) must be tailored to their development stage, risk exposure, and international growth potential [2]. Effective support schemes integrate not only funding but also complementary services such as export consulting, post-grant acceleration, and assistance with certification and foreign market access [1].

A study by the World Bank identifies the most effective mechanisms for enhancing the export potential of SIEs, including targeted subsidies for adapting products to international standards, participation in foreign exhibitions, and co-financing of marketing activities abroad [3].

The Organisation for Economic Co-operation and Development highlights the importance of institutional coherence between government agencies responsible for innovation and export policy, as well as the need to digitalize all procedures for obtaining support [4].

According to the 2024 report published by the Analytical Center under the Ministry of National Economy of the Republic of Kazakhstan, a substantial share of state-supported small innovative enterprises (SIEs) operate without a defined export orientation. Moreover, the proportion of innovative firms participating in international trade remains limited, not exceeding 8–10% [5]. These findings point to a structural disconnect between national innovation policy and export promotion frameworks.

In their empirical investigation, Haddoud et al. analyze the influence of Export Promotion Programmes (EPPs) on the export performance of small and medium-sized enterprises (SMEs), with particular attention to the role of network development. Grounded in institutional and network-based theories of internationalization, the study conceptualizes EPPs as instruments designed to enhance SMEs' connections with both domestic and international stakeholders. The findings suggest that while informational and educational elements of EPPs contribute to the formation of business networks, their direct impact on export performance is relatively limited. Conversely, experiential components – such as trade missions, international exhibitions, and hands-on training – indirectly foster export success by strengthening firms' relational networks. Establishing connections with foreign buyers is identified as a critical factor in determining the overall effectiveness of EPPs [6].

A study by UNCTAD finds that in developing countries, support for SIEs without an export-oriented toolkit has a limited multiplier effect. In contrast, when financing is combined with acceleration programs, training on entering foreign markets, and logistics subsidies, the share of exporters among SIEs increases by 2–3 times within three years [1].

A comparative analysis of government support for SIEs in Central Asian countries conducted by the EBRD (2023) shows that Kazakhstan ranks only fourth in terms of access to export financing for SIEs in the region, lagging behind Uzbekistan, Kyrgyzstan, and Georgia [7].

An important component of supporting the export activities of SIEs is the development of digital services. According to a report by Astana Hub, the creation of the Export.gov.kz platform and its integration with DAMU and QazTrade could enhance the transparency and accessibility of support measures, particularly for small technology companies [8].

In the international academic community, considerable attention is devoted to examining the impact of government support instruments on the innovation and export activities of small enterprises. Contemporary studies emphasize the necessity of developing

integrated support models that combine grant financing, technological assistance, and access to global markets.

Empirical evidence suggests that innovation subsidies exert a positive yet delayed influence on the export activity of SMEs, and their effectiveness becomes significant only when complemented by additional support mechanisms such as export consulting, standardization services, and foreign trade training [9].

One of the central areas in evaluating the effectiveness of government support for SMEs involves assessing the impact of subsidies on firms' research and innovation activities. Zúñiga-Vicente et al. investigate how public subsidies influence corporate investment in R&D [10]. Through a meta-analysis of existing empirical studies, the authors find that government support generally has a positive effect on R&D expenditure, and in some cases, generates an additionality effect – encouraging firms to increase their own investment in innovation. The study further emphasizes that the effectiveness of subsidy programs is largely contingent upon their design, the specific characteristics of the industry, and the intrinsic innovative capacity of the beneficiary firms. These findings hold important implications for the development of integrated policy frameworks aimed at enhancing SME export performance, as firms' innovation potential is often a critical determinant of their competitiveness in international markets [10].

An expanded evaluative framework for assessing the multiplier effects of innovation grants has been proposed, moving beyond conventional financial metrics to incorporate institutional factors. These include increased investor confidence, improved access to private financing, and the development of broader business networks – elements that are particularly critical in contexts marked by institutional volatility [11].

The efficiency of support initiatives can be substantially improved through the implementation of digital public governance mechanisms, such as performance assessment platforms, automated oversight systems, and integrated one-stop service models tailored for small innovative firms – a policy approach that is also considered relevant to Kazakhstan's developmental context [12].

A similar methodology is applied by authors from Finland and Singapore, who examine the impact of export accelerators on the pace of SIE internationalization. It was found that public-private support platforms-including mentorship, technological scouting, and financial assistance-produce a sustained effect within 2–3 years following participation [13].

Recent scholarship has increasingly emphasized the evolving nature of export support mechanisms in the internationalization of SMEs. Calheiros Lobo and Au Yong Oliveira highlight the significance of institutional frameworks – such as incubators and accelerators – in addressing resource constraints, alongside the growing relevance of digitalization and targeted policy interventions [14]. In contrast, Kahiya critiques the prevailing export assistance literature for its conceptual and empirical shortcomings, advocating for more context-specific, firm-level analyses [15]. Together, these studies underscore the importance of adaptive and context-aware support strategies within diverse institutional settings.

The findings of this research suggest that the effectiveness of financial support for small innovative enterprises (SIEs) in Kazakhstan is shaped by four critical factors:

1) Strong institutional coordination across programs and agencies;
2) Integration of export-focused elements into grants and financing tools;
3) Flexibility of instruments across different stages of enterprise development;
4) Digitalization and the creation of unified, one-stop service platforms.

By combining theoretical perspectives with empirical analysis, this study offers a robust methodological framework for evaluating the export performance of publicly supported SIEs in Kazakhstan over the 2021–2024 period.

Materials and methods. This study adopts a mixed-methods approach to evaluate the effectiveness of government financial support for small innovative enterprises (SIEs) in Kazakhstan, with a specific focus on export performance. Methodological rigor is ensured through the application of core econometric techniques, supplemented by contextual analyses to enhance interpretive depth.

The research examines the 2021–2024 period, reflecting structural shifts in Kazakhstan's innovation support system post-COVID-19. Empirical data were sourced from national institutions, including the Ministry of National Economy, QazInnovations, DAMU, Baiterek, and the Bureau of National Statistics.

Key variables include the number of supported firms, funding volumes, sectoral allocation, and export activity. A linear regression model serves as the primary analytical tool, estimating the relationship between public funding levels and SIE export revenues.

$$Y_i = \alpha + \beta X_i + \varepsilon_i, \quad (1)$$

where:

Y_i - export revenue in year i,

X_i - government funding in year i,

α - intercept,

β - slope coefficient,

ε_i - error term.

The results indicate a strong positive relationship, with an estimated regression equation:

$$Y = 6.38 + 0.561X, \quad (2)$$

Statistical diagnostics confirmed the model's robustness (R^2=0.988), and the coefficients were statistically significant at the 5% level based on t-tests. The model satisfies classical linear regression assumptions, as verified through normality (Shapiro–Wilk) and homoscedasticity (Breusch–Pagan) tests.

To complement the regression results, the Pearson correlation coefficient was calculated to assess the strength of association between funding levels and export revenues:

$$r = 0.994, \quad (3)$$

This confirms a very strong positive linear correlation between the two variables.

To contextualize the quantitative findings, a SWOT analysis was used to examine the institutional environment surrounding export-oriented innovation. The analysis considered factors such as transparency of selection procedures, timeliness of fund disbursement, and availability of export support infrastructure, including accelerators and certification services.

A simple linear trend model was used to project future export revenues under the current policy framework. The forecast equation is:

$$Y = 51.6 + 9.1X, \quad (4)$$

where Xrepresents the sequential year index (2021 = 1, ..., 2024 = 4). According to this model, export revenues could reach 124.4 billion KZT by 2028.

By clearly distinguishing between core analytical methods and supplementary tools, the study avoids methodological overload and ensures a focused interpretation of results. Although regression and correlation analyses provide a solid empirical base, the integration of interpretive tools like SWOT analysis enriches the assessment with institutional insights, ensuring analytical depth without undermining methodological coherence.

Results and discussion. Between 2021 and 2024, Kazakhstan advanced innovative entrepreneurship by integrating financial incentives with institutional support targeting small and medium-sized enterprises (SMEs). Policy measures emphasized startup grants, interest rate subsidies, the expansion of innovation infrastructure (e.g., technology parks and accelerators), and the promotion of exports. However, program outcomes were uneven, influenced by structural economic constraints and evolving governance approaches.

Despite global economic uncertainties, Kazakhstan maintained nominal growth in public funding for small innovative enterprises (SIEs), reflecting sustained governmental commitment. Key initiatives – such as the «Innovation Grant», «Business Road Map 2025», the DAMU Fund, and QazInnovations – contributed to enhancing production and export capabilities. More recently, a shift has emerged from grant-based support toward subsidized lending models (Figure 1), indicating a reorientation of policy instruments.

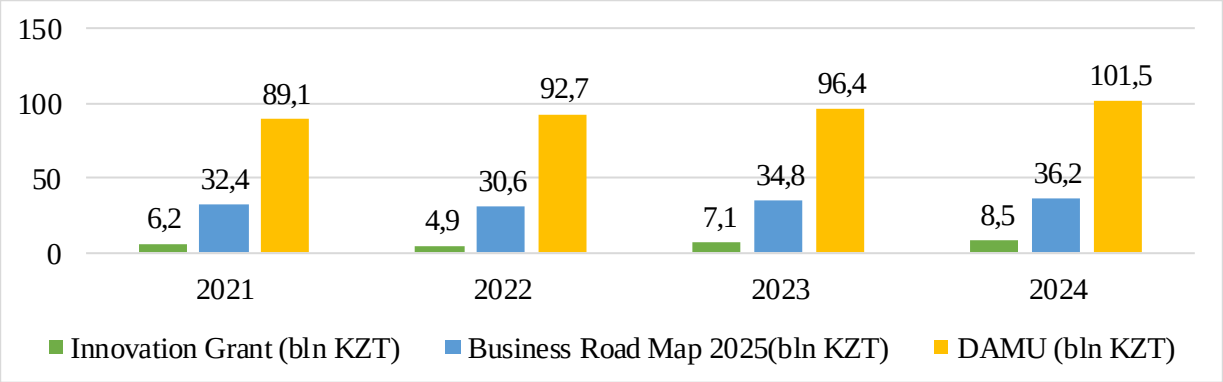

Figure 1– Trends in Government Financial Support for Small Innovative Enterprises in Kazakhstan (2021–2024)

Note: compiled by authors based on data from DAMU, QazInnovations, and the Ministry of National Economy of the Republic of Kazakhstan

The sustained increase in funding for major government programs highlights a continued policy focus on fostering innovation-led and export-oriented economic development. Expanded allocations through instruments such as DAMU, «Business Road Map 2025», and QazInnovations signal strategic intent to reinforce the entrepreneurial and innovation ecosystem.

DAMU experienced the largest absolute increase in funding (+13.9%), while innovation grants recorded the highest relative growth (+37.1%). Nevertheless, innovation grants remain a relatively minor component of total public expenditure, thereby constraining support for high-tech initiatives. The moderate growth of the «Business Road Map 2025» program (+11.7%) suggests the need for strategic recalibration to better align with shifting export priorities.

Survey data indicate a disconnect between funding levels and beneficiaries' perceptions of effectiveness. A mid-range Export Activity Index (EAI) score of 2.53 out of 5 suggests the necessity of shifting focus from expanding program scale to enhancing the quality of implementation – particularly in tracking and evaluating export outcomes (Figure 2).

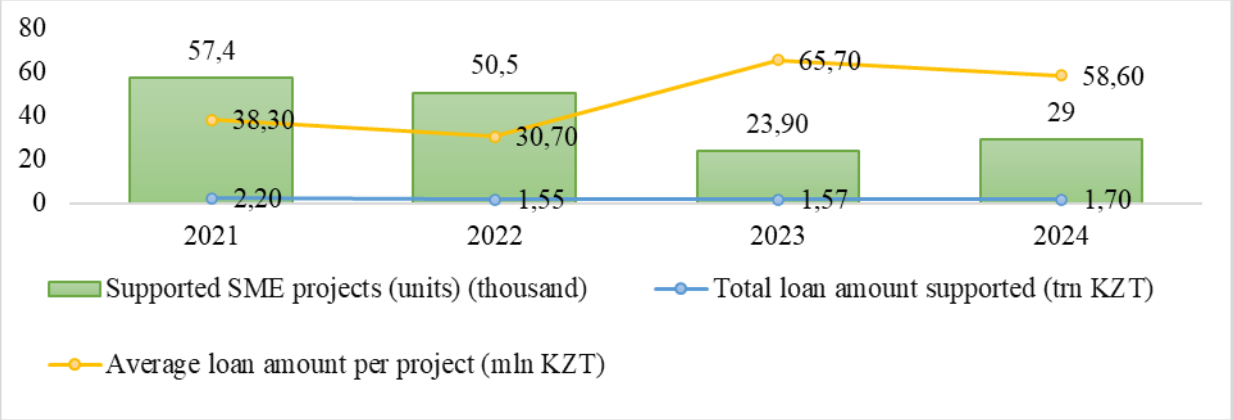

Figure 2 – Export Activity Index (EAI) Based on Surveyed SIEs (2021–2024)

Note: authors calculations based on structured survey data (n = 43), conducted March–April 2024

Public reporting from the Damu Fund and the Baiterek/Damu group indicates sustained large-scale SME support over 2021–2024, with year-to-year variation in both coverage and financing volumes. In 2021, Damu's annual/public reporting notes an expansion of support to 57.4 thousand projects with a total support amount of KZT 2.2 trillion (damu.kz). For 2022, Baiterek/Damu reporting summarises 50.5 thousand supported projects and KZT 1.55 trillion in loans (kase.kz). In 2023, Damu's sustainability reporting records 23.9 thousand projects and a total of KZT 1.57 trillion (damu.kz). In 2024, Damu's annual report highlights support for more than 29 thousand projects and KZT 1.7 trillion in loans (damu.kz). Taken together, these figures suggest that, while annual project counts fluctuate, the programme remains financially significant, underscoring the importance of assessing not only volumes of support but also its targeting, additionality, and measurable outcomes.

However, despite this positive dynamic, there is a clear imbalance in the focus of programs on innovation and export-oriented projects. Fewer than 15% of recipients operate in high-tech, export-oriented sectors, indicating a misalignment between program goals and actual outcomes. This indicates that the current structure of government support for SIEs remains predominantly inclusive and social in nature, and requires a shift in focus toward improving effectiveness in terms of access to foreign markets and the creation of added value.

To assess the impact of financial support on exports, annual changes in the number of exporting SIEs were analyzed.

Enhancing the export orientation of small innovative enterprises (SIEs) in the Republic of Kazakhstan is one of the key objectives of the national economic diversification strategy. However, despite the formal recognition of the export potential of SIEs in regulatory and programmatic documents, their actual foreign economic activity remains limited in both absolute and relative terms. Domestic experience shows that even with access to government financing, not all SIEs exhibit a systematic orientation toward international markets.

Key barriers to export growth include weak institutional support, limited foreign trade competencies, and non-compliance with international standards. These conditions create a gap between the stated objectives of government support programs and their actual impact on the export behavior of entrepreneurs.

To empirically assess the relationship between the scale of government support and the foreign economic activity of SIEs, a selective data summary was conducted on the number of exporting entities among recipients of state support for the period 2021–2024. The calculation included enterprises that received targeted funding through the «Innovation Grant», DAMU, and «Business Road Map» programs and reported export revenues in official foreign trade statistics (Figure 3).

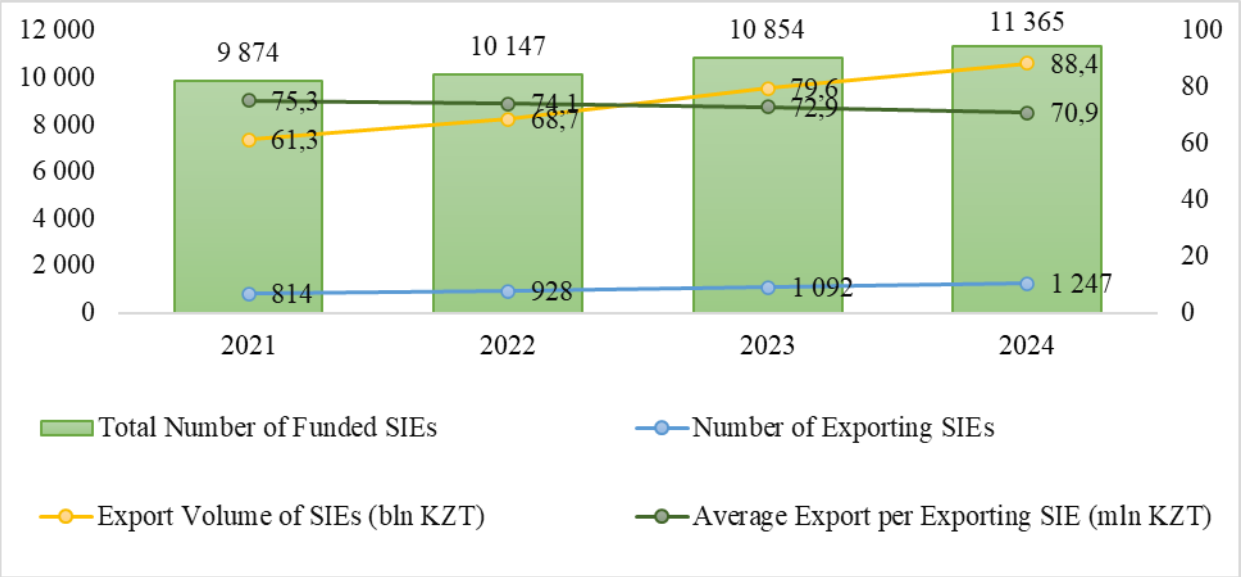

Figure 3 – Number of exporting MIPS among funded enterprises, 2021-2024

Note: Compiled based on data from the Ministry of National Economy of the Republic of Kazakhstan, QazTrade, DAMU, and the Committee on Statistics of the Republic of Kazakhstan

Data from the 2021–2024 period indicate a gradual yet positive trend in export activity among government-supported small innovative enterprises (SIEs). The share of exporting SIEs increased from 8.2% to 11%, reflecting a 53% rise in absolute numbers and signaling a partial shift in firm behavior toward international market engagement.

This section presents a SWOT analysis of current financial support programs, offering a structured evaluation of their internal strengths and weaknesses, alongside external opportunities and threats that shape the export capacity of SIEs.

Given limited public resources and intensifying global competition, the effectiveness of these programs depends on their institutional flexibility, responsiveness, and alignment with national strategic priorities. The SWOT framework enables a conceptual evaluation of the financing policy's internal coherence and external relevance.

The SWOT analysis identifies the internal advantages and limitations of support programs, while also examining external conditions that influence their overall effectiveness. This approach is particularly appropriate in the context of a multi-instrument policy that includes both grant and credit financing, as well as non-material forms of assistance (such as consulting, acceleration, and post-financing support) (Table 1).

Table 1 – SWOT Analysis of SIE Financing Programs in the Republic of Kazakhstan (Export Focus)

Strengths	Weaknesses
– Presence of institutionalized infrastructure (DAMU, QazInnovations, Baiterek)	– Low coordination between programs and institutions
– Access to grant and subsidized forms of financing	– Absence of a mandatory export component in project selection criteria
– Geographic coverage (including access in the regions)	– Limited mechanisms for monitoring export performance
– Support for both early-stage and established SIEs	– Low transparency in post-financing evaluation criteria
– Consistent budgetary funding and political support	– Insufficient support for international market entry (logistics, certification)
Opportunities	Threats
– Integration of export services into digital infrastructure (Export.gov.kz)	– Geopolitical instability and restrictions on foreign markets
– Development of the EAEU and access to the Chinese market	– Currency risks and fluctuations in external demand
– Growing export demand for high-tech products	– Competition from transnational corporations
– International co-financing and acceleration programs	– Administrative barriers to obtaining licenses and product certification
Note: compiled by the authors	

The conducted SWOT analysis confirms the presence of a number of institutional and substantive strengths within the current architecture of government support for small innovative enterprises (SIEs), including broad geographic coverage, a diversity of instruments, and the institutional resilience of program operators. At the same time, the identified weaknesses-particularly the absence of a formalized export component in project evaluation criteria and the fragmentation of interagency coordination-reduce the overall effectiveness of support in terms of stimulating foreign economic activity.

The existence of export opportunities, including the digitalization of support mechanisms and integration with Eurasian and Asian markets, can serve as a strategic foundation for the modernization of existing instruments. However, these opportunities may be offset by external threats, primarily geo-economic instability, currency volatility, and institutional barriers to cross-border product certification.

Assessing the effectiveness of government support for small innovative enterprises in Kazakhstan requires not only quantitative analysis of funding volumes and the number of recipients, but also a substantive differentiation of program types based on their functional orientation. Different instruments exert heterogeneous effects on export potential, which is determined not only by the form of support provided, but also by embedded mechanisms for project selection, accompanying services, and institutional oversight.

Taking this into account, the present study develops a typology of government programs based on two key dimensions: the level of innovation intensity (the program's ability to stimulate technological solutions) and export effectiveness (the share of supported SIEs demonstrating export activity within 12–18 months of receiving support). This matrix-based model allows for the identification of programs with the highest multiplier effect, as well as those instruments that are formally operational but do not effectively contribute to the foreign economic expansion of SIEs.

To objectively determine the strength and nature of the relationship between the variables, the Pearson correlation coefficient was applied. The cumulative volume of government support for SIEs by year was used as the independent variable (X), while the

cumulative export volume of SIEs recorded through official channels for the corresponding period served as the dependent variable (Y).

Although the time lag between the receipt of support and the realization of export activity typically ranges from 6 to 18 months, the analysis utilized within-year comparisons, allowing for the identification of stable linear relationships under the condition of consistent reporting (Table 2).

Table 2 – An Academic Analysis of the Correlation Between Government Funding Levels and Export Activities of Innovation-Oriented Enterprises During the 2021–2024 Period

Year	SIE Funding Volume, bln KZT (X)	SIE Export Volume, bln KZT (Y)
2021	127.7	61.3
2022	128.2	68.7
2023	138.3	79.6
2024	146.2	88.4
Note: calculated based on official data from DAMU, QazTrade, and the Ministry of National Economy of the Republic of Kazakhstan		

The observed strong correlation (r = 0.994) indicates a significant association between the volume of government funding and the export performance of SIEs. Given the limited time series and the specific characteristics of the studied group of enterprises, the Ordinary Least Squares (OLS) method was used as a basic tool to construct a linear regression reflecting the dependence of export revenue on the year.

The forecast is based on empirical data from 2021–2024, during which a steady increase was observed in both the absolute number of exporting SIEs and the total volume of their foreign trade revenue. It is assumed that if the current level of government funding and institutional configuration is maintained, export activity will continue to grow linearly, with an annual increase in the range of 8–10%, although the growth rate may flatten in the absence of institutional reform.

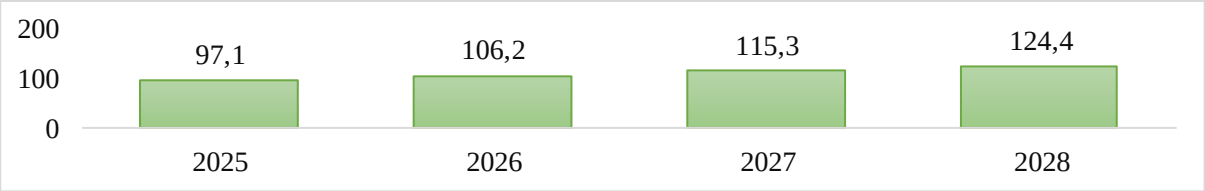

Figure 4 – Forecast of MIP exports for 2025-2028, bln KZT

Note: compiled by the authors

Forecasts derived from the linear model suggest a stable upward trajectory in export revenues of small innovative enterprises (SIEs), contingent on the continuity of current government support mechanisms and external economic conditions. By 2028, total SIE exports are projected to reach 124.4 billion KZT – an increase of 40.7% compared to 2024 and more than double the 2021 level.

However, the projected annual growth rate of 8–10% is nominal and does not account for inflation, exchange rate fluctuations, or changes in global purchasing power. Consequently, real export growth may be considerably lower, especially under conditions of currency depreciation or external price instability. To improve the accuracy of future policy

evaluations, analytical models should incorporate deflators or real-term adjustments (Figure 5).

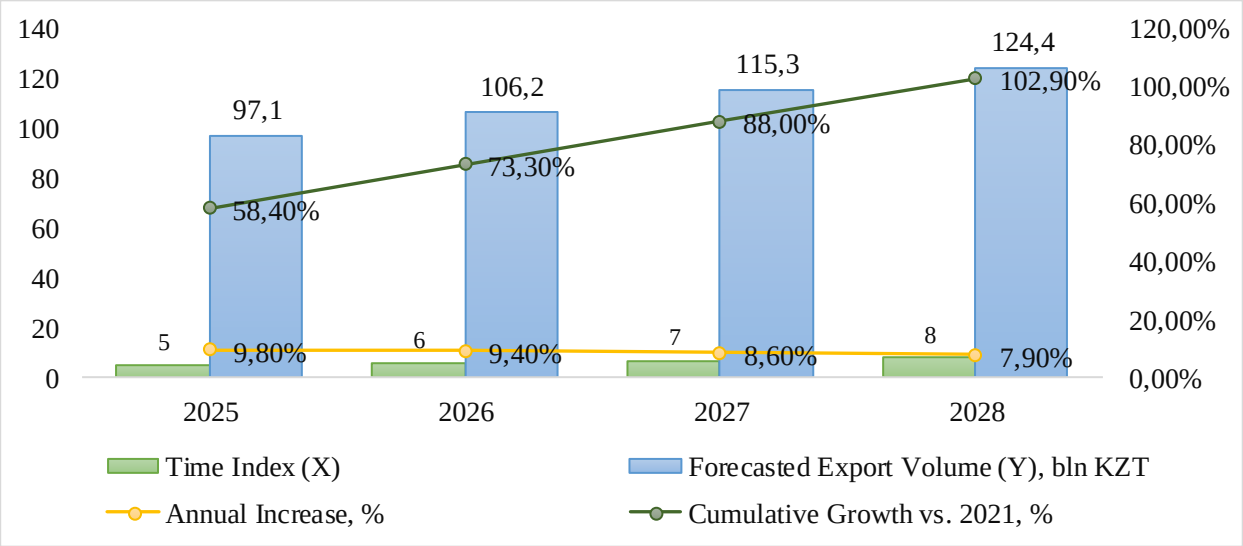

Figure 5 - Projected Export Dynamics of Innovation-Oriented Enterprises in Kazakhstan for the Period 2025–2028

Note: compiled by the authors

It is crucial to acknowledge that the linear model fails to capture the impact of external shocks, shifts in the institutional landscape, and qualitative heterogeneity across different categories of enterprises. Therefore, the obtained values represent an optimistic scenario under an inertial development trajectory. Without structural transformation of the programs and a stronger export focus, achieving the projected targets may prove challenging.

To improve the reliability of the forecast and develop resilient policy measures, quantitative analysis must be complemented with qualitative data reflecting the perceptions of SIEs themselves-such as barriers, motivations, and assessments of program effectiveness. These aspects are examined below, which presents the results of expert surveys and the development of an effectiveness assessment model.

The study identified a consistent relationship between the volume of government support and changes in the export activity of small innovative enterprises (SIEs) in Kazakhstan during the 2021–2024 period. Although funding levels and institutional outreach expanded, the overall effectiveness of these measures in enhancing foreign market engagement remains limited.

Data were collected using a structured questionnaire comprising seven core questions designed to assess the export orientation of public support. A five-point Likert scale (1 = strongly disagree; 5 = strongly agree) facilitated quantitative analysis and the development of composite indices. The survey captured both aggregate patterns and individual variations in stakeholder perceptions, offering an empirical foundation for critically assessing the impact of support programs on the export capacity of SIEs within the broader context of Kazakhstan's economic policy (Table 3).

Table 3 – Summary Results of the Survey

№	Question Formulation	Average Score (Mean)	Share of Respondents Who Answered 4 or 5, %
1	The conditions for participating in the program were clear and transparent	3.9	67.4%
2	The amount of funding provided matched the needs of the export project	2.8	32.6%
3	The program had a real impact on the company's entry into foreign markets	2.6	30.2%
4	Post-funding support was provided (training, consulting, digital services)	2.2	20.9%
5	The government assisted with certification, patenting, logistics, or participation in export exhibitions	2.0	16.3%
6	The program included targeted export KPIs (e.g., export revenue growth)	1.8	14.0%
7	Overall, participation in the program increased the enterprise's export potential	2.4	25.6%
Note: calculated based on official data from DAMU, QazTrade, and the Ministry of National Economy of the Republic of Kazakhstan.			

An integral Export Activity Index (EAI) was applied for the overall quantitative assessment.

$$EAI = \frac{3{,}9+2{,}8+2{,}6+2{,}2+2{,}0+1{,}8+2{,}4}{7} = 17{,}77 \approx 2{,}53, \quad (5)$$

The analysis of survey data collected from representatives of small innovative enterprises (SIEs) that received government support during the period 2021–2024 provides a well-founded conclusion regarding the existence of a significant gap between the declared objectives of funding programs and the actual perception of their effectiveness by beneficiaries. Despite relatively high ratings for the transparency of participation procedures, most entrepreneurs do not perceive a direct correlation between the funds received and an increase in export activity. Low average scores across several key parameters-such as access to non-financial support instruments (certification, logistics, post-financing services)-indicate the fragmented nature of existing mechanisms and the absence of a comprehensive, export-oriented approach to the transformation of SIEs.

Moreover, the observed undervaluation of programmatic export KPIs and the weak post-financing support confirm the institutional limitations of current instruments in terms of promoting international market entry. This, in turn, reduces the overall multiplier effect of public spending and restrains the development of export-oriented small businesses. The value of the integral Export Activity Index (EAI), recorded at 2.53 out of 5, is interpreted as an indicator of moderately low effectiveness from the perspective of participants themselves, objectively signaling the need for a reassessment of priorities and organizational principles within the state support system for the innovation-export sector.

The study underscores the need to reconsider the logic of program architecture toward deeper integration of non-financial incentives, the establishment of targeted export benchmarks, and the provision of systemic support for SIEs throughout all stages of their export activity.

In this context, the present study proposes a two-tier evaluation model, which includes:

1. An Export Activation Index (EAI), based on the aggregation of key performance indicators of SIEs following receipt of funding;
2. Expert survey of state support recipients, aimed at identifying institutional barriers, assessing program perception, and establishing priorities for future policy development.

The proposed index is an aggregated scale constructed based on the following components:

W_1 (Export-to-Revenue Ratio) - weight 0.4

W_2 (Export Growth Rate After Receiving Support) - weight 0.3

W_3 (Presence of International Certification/Patent) - weight 0.2

W_4 (Entry into New Markets After Receiving Funding) - weight 0.1

Each indicator is assigned a value from 0 to 1. The final index is calculated using the following formula:

$$EAI = 0{,}4 \cdot W1 + 0{,}3 \cdot W2 + 0{,}2 \cdot W3 + 0{,}1 \cdot W4\,, \quad (6)$$

An example calculation based on a sample of 50 SIEs that participated in support programs during 2022–2023 yielded the following result (Table 4).

Table 4 – Average Component Values and Final Export Activity Index (EAI)

Indicator	Average Value (Sample)	Weight Coefficient	Weighted Value
W_1 – Export Share in Total Revenue	0.31	0.4	0.124
W_2 – Export Growth After Program Participation	0.42	0.3	0.126
W_3 – Presence of International Certifications	0.28	0.2	0.056
W_4 – Entry into New Markets	0.19	0.1	0.019
Final Export Activity Index (EAI)	–	–	0.325
Note: authors calculations based on survey data and enterprise self-declarations			

The average value of the integral Export Activity Index (EAI) for the sample amounted to 0.325 on a scale from 0 to 1, which corresponds to a low-to-moderate level of export effectiveness of the programs. Particularly weak scores were observed for international certification and entry into new markets, indicating a lack of institutional support specifically during the commercialization phase. This confirms the need to introduce post-financing monitoring and to differentiate programs based on the level of export maturity of the project.

Despite increased funding and broader program participation, the impact of government support on the foreign economic activity of small innovative enterprises (SIEs) remains limited. The following policy recommendations aim to strengthen existing frameworks by aligning support mechanisms more directly with export-driven innovation.

1. Integrate Export Performance Metrics. It is recommended that export performance indicators be institutionalized as core evaluation criteria within SIE financing programs. This entails embedding export-oriented key performance indicators (KPIs) into project selection, prioritizing initiatives with international market potential, and linking ongoing financial support to the achievement of clearly defined export targets.

2. Establish Public Export Accelerators. To overcome institutional bottlenecks, the creation of public export accelerators is advised. These should deliver both financial and non-financial support in areas such as product certification, intellectual property protection,

foreign market entry, and logistics. In addition, they should offer expert consulting, access to international marketing platforms, and participation in global trade promotion initiatives.

3. Segment support programs by the SIE's level of export readiness. The following three-tier support model is proposed:

– «Start» level – basic acceleration and preparation for foreign economic activity;
– «Scale» level – financing the entry into foreign markets;
– «Global» level – support for export scaling and international localization.

4. Existing evaluation mechanisms prioritize fund allocation over measurable results, undermining long-term export impact. It is recommended to:

– Introduce the Export Activity Index (EAI) as a standard tool for evaluating programs;
– Implement regular recipient reporting disaggregated by foreign economic indicators;
– Conduct qualitative research and surveys of SIEs to incorporate entrepreneurial assessments of program effectiveness.

5. Leverage the potential of international partnerships (GIZ, EBRD, UNIDO, ADB) to establish joint acceleration mechanisms for export-oriented SIEs. This will:

– Facilitate knowledge and technology transfer;
– Enable navigation beyond Kazakhstan's regulatory framework in certification and marketing;
– Simplify SIE access to international venture infrastructure and financing.

6. It is proposed to formalize the status of export-oriented innovative entrepreneurship as a separate category of government support within regulatory documents, including:

– Tax incentives for enterprises with a verified share of exports;
– Grants for international patenting, certification, and marketing adaptation;
– The introduction of an «export voucher» mechanism to reimburse part of the costs incurred when entering new markets.

Achieving long-term, export-led growth among small innovative enterprises (SIEs) necessitates a strategic shift in government policy – from a predominantly quantitative, subsidy-based approach to a comprehensive, ecosystem-oriented model. This model should follow a phased progression: initial support, targeted guidance, international market adaptation, and scalable expansion.

A financing system that is institutionally integrated and focused on measurable outcomes is essential to increasing the contribution of SIEs to national export performance. Such a transformation would play a pivotal role in advancing technological modernization and reinforcing Kazakhstan's position within the global economic landscape.

Conclusion. This study offers an in-depth assessment of government financing initiatives aimed at supporting small innovative enterprises (SIEs) in Kazakhstan, with a specific emphasis on their role in promoting export development amid rapid technological change and intensifying global competition. The analysis reveals a positive correlation between the scale of public financial support and improvements in the export performance of SIEs. However, the findings also highlight several institutional constraints that hinder the sector's capacity to fully leverage its export potential.

The evaluation of the 2021–2024 period indicates that, despite increased funding and expanded access to support programs, the proportion of SIEs actively engaged in export-oriented activities remains relatively low. The use of multiple analytical tools – including SWOT analysis, program typology, empirical modeling, and expert assessment – underscores

the need to transition from a predominantly funding-based approach to a more integrated policy model that explicitly prioritizes export-led outcomes.

Persistent institutional inefficiencies – such as fragmented implementation of support measures, the absence of export-specific performance metrics, and inadequate assistance in key areas like certification and market integration – continue to limit the effectiveness of public investment in the innovation ecosystem. The Export Activity Index (EAI) developed in this research further demonstrates the importance of sustained strategic oversight to ensure that innovation support translates into measurable export growth.

Based on these insights, the study outlines several strategic policy recommendations. These include embedding export performance indicators into program design, introducing post-financing support mechanisms, differentiating assistance according to firms' export readiness, enhancing digital infrastructure, and harmonizing domestic support instruments with international frameworks. Collectively, these reforms are intended to improve the targeting and effectiveness of public support while generating sustainable, long-term impacts across the SIE sector.

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ЭКСПОРТТЫ ЫНТАЛАНДЫРУ КОНТЕКСТІНДЕ ҚР ШИК ҚАРЖЫЛАНДЫРУДЫҢ МЕМЛЕКЕТТІК БАҒДАРЛАМАЛАРЫНЫҢ ТИІМДІЛІГІН БАҒАЛАУ

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Түйін. *Қазақстанның экономикалық трансформациясында шағын инновациялық кәсіпорындар (ШИК) маңызды рөл атқарады, себебі олар технологиялық дамуға ықпал етіп, экспортқа бағытталған салаларды әртараптандыру мен кеңейтуге жағдай жасайды. Жаһандық бәсекелестіктің күшеюі мен елдің шикізаттық емес экспортқа бағытталған стратегиялық бағыты аясында ШИК-ті қолдауға арналған мемлекеттік қаржылық құралдардың тиімділігін бағалау өзекті мәселеге айналуда. Бұл зерттеу 2021–2024 жылдар аралығында шағын инновациялық кәсіпорындардың экспорттық көрсеткіштеріне қолданыстағы мемлекеттік қолдау бағдарламаларының әсерін кешенді түрде талдайды. Негізгі зерттелетін қаржылық құралдарға «Инновациялық грант», «Бизнес жол картасы», «Қарапайым заттар экономикасы», сондай-ақ QazInnovations, ДАМУ, «Бәйтерек» сияқты даму институттары арқылы берілетін субсидиялар жатады. Зерттеу барысында статистикалық әдістер, SWOT-талдау және корреляциялық талдау элементтері қолданылып, мемлекеттік қаржыландыру мен экспорттық нәтижелер арасындағы байланыс анықталды. Мақалада халықаралық нарықтарға шығу үдерісінде туындайтын сын-қатерлерге бейімделу үшін қаржылық құралдарды жетілдіруге, сондай-ақ экспортқа бағытталған инновациялардың тұрақты дамуына ықпал ететін институционалдық жағдайларды қалыптастыруға бағытталған практикалық ұсынымдар ұсынылады.*

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ОЦЕНКА ЭФФЕКТИВНОСТИ ГОСУДАРСТВЕННЫХ ПРОГРАММ ФИНАНСИРОВАНИЯ МИП В РК В КОНТЕКСТЕ СТИМУЛИРОВАНИЯ ЭКСПОРТА

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Резюме. *Малые инновационные предприятия (МИП) играют ключевую роль в процессе экономической трансформации Казахстана, способствуя технологическому прогрессу, а также диверсификации и росту экспортно-ориентированных отраслей. В условиях усиливающейся глобальной конкуренции и стратегического курса страны на развитие несырьевого экспорта, особую актуальность приобретает оценка эффективности государственных финансовых инструментов, направленных на поддержку МИП. В данной статье проводится анализ результатов действующих государственных программ поддержки, с акцентом на их влияние на экспортную деятельность малых инновационных предприятий в период с 2021 по 2024 годы. В рамках исследования рассматриваются ключевые инструменты поддержки, включая программы «Инновационный грант», «Дорожная карта бизнеса», «Экономика простых вещей», а также субсидии, предоставляемые через институты развития (QazInnovations, ДАМУ, Baiterek и др.). Для установления взаимосвязи между объемами финансирования и экспортными результатами применялись методы статистического анализа, SWOT-анализ и элементы корреляционного подхода. В статье представлены практические рекомендации по адаптации финансовых инструментов к вызовам внешнеэкономической экспансии МИП, а также по формированию институциональной среды, способствующей развитию экспортно-ориентированных инноваций.*

Ключевые слова: *малые инновационные предприятия, государственная поддержка, экспорт, финансирование, эффективность, инновационная экономика, QazInnovations, DAMU.*

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