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IMPROVING INNOVATION ACTIVITY IN SMALL BUSINESS ENTITIES

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Abstract: This article examines how innovation activity in small business entities can be improved under the conditions of New Uzbekistan. Small businesses account for a substantial share of value added and employment in the national economy, yet their capacity to develop and introduce new products, processes and organizational methods is constrained by limited finance, skills and access to knowledge. The study reviews international approaches to measuring and supporting innovation in small firms, analyzes the barriers identified in comparative research, and examines official statistics on small business in Uzbekistan. The findings indicate that small businesses contribute strongly to output and jobs, while their innovation potential remains underused, mainly because support instruments are not linked to firm-level needs. On this basis, the article proposes an improved model for developing innovation activity in small businesses, built on needs assessment, targeted support, skills development and results monitoring, and outlines practical measures for its implementation.

Keywords: small business, innovation activity, small and medium enterprises, innovation barriers, business support, skills development, innovation measurement, New Uzbekistan.

INTRODUCTION

Small business entities form a major part of the national economy in most countries, and their ability to innovate determines how quickly new products, services and production methods spread through the market. In Uzbekistan, the Strategy for a New Uzbekistan for 2022–2026 gives a central place to the development of entrepreneurship, the diversification of the economy and the expansion of the private sector [1]. These priorities make the question of how small firms create and adopt innovations a practical concern for policymakers and managers alike.

Innovation in small firms differs from innovation in large enterprises. Small firms usually have limited research budgets, fewer specialized staff and less formal planning, which makes their innovation more dependent on the owner's knowledge, customer relations and the availability of external support. The OECD's comparative analysis of SMEs points to the same pattern: smaller firms face size-related obstacles in gaining access to finance, skills, technology and knowledge-based capital that they need to innovate [2].

A gap remains between the general recognition of small business as a source of growth and the practical tools that help individual firms innovate. Many support programs are defined by the size and legal status of firms rather than by their innovation needs, and many studies describe barriers without linking them to a sequence of actions that a firm can follow. This article addresses the gap by translating international findings on barriers into a practical sequence of diagnosis, support, training and monitoring, and by testing the logic of this sequence against official indicators for Uzbekistan.

The purpose of this article is to propose an improved model for developing innovation activity in small business entities and to assess its feasibility under the conditions of New Uzbekistan. The study pursues four objectives: to define innovation in small firms in line with international statistical practice; to identify the main barriers to innovation; to analyze the official indicators of small business development; and to formulate measures that support innovation at the level of the firm.

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LITERATURE REVIEW AND METHODOLOGY

International statistical guidance defines innovation as the implementation of a new or significantly improved product, process, marketing method or organizational method. The Oslo Manual 2018, prepared jointly by the OECD and Eurostat, is the reference guide for collecting and using data on innovation. Its fourth edition extends the coverage of innovation phenomena and gives attention to digital transformation, which affects how firms of all sizes develop new offerings and organize their work [3]. This definition is broad enough to include small firms whose innovations are incremental, such as a new service package, an improved process or a new way of serving customers.

The methodology of the study combines three approaches. The normative approach analyzes the strategic documents that set national priorities for entrepreneurship. The comparative approach relates the barriers identified in international research to the conditions of small business in Uzbekistan. The statistical approach interprets official indicators of small business output and employment. Sources were selected from documents published in 2016 or later, including strategic decrees, international reports, the international statistical manual and official statistical releases.

1. Innovation in the small firm. A small firm innovates when it introduces a change that is new to the firm, and the change becomes evident in its products, processes, marketing or organization. The scale of innovation is usually smaller than in large companies, but the effect on the firm's competitiveness can be significant. For this reason, measurement should capture small changes as well as major breakthroughs.

2. Barriers to innovation. The comparative literature and the OECD analysis identify several groups of barriers. Financial barriers include difficulty in obtaining credit for risky projects and the high cost of external finance. Human resource barriers include the shortage of staff with technical and managerial skills. Information barriers arise when firms do not know about available technologies, support programs or potential partners. Regulatory barriers include administrative burden and uncertainty about procedures, which increase the cost of experimentation [2].

3. The role of the support environment. Innovation is strongly influenced by the wider support environment. Public programs, training institutions, technology centers and networks of firms can reduce the costs and risks faced by a single enterprise. The effectiveness of this environment depends on whether programs are designed around the actual needs of small firms rather than around administrative categories alone.

4. Digital opportunities. Digital tools lower the cost of accessing information, reaching customers and managing operations. The OECD's analysis notes that digitalization affects the dynamics of business entry and job creation, and that the benefits are concentrated in certain activities [2]. Small firms that adopt digital tools can test new products and services with less investment, but they also need the skills to use these tools productively.

5. Measurement of innovation in small firms. Measurement is a precondition for management. Without a common definition, a firm cannot compare its results across periods, and a support institution cannot evaluate which programs work. The Oslo Manual provides a framework in which innovation is classified by type, so that a firm can record whether a change concerns its products, processes, marketing or organization [3]. For small firms, a simplified version of this classification is sufficient: the owner needs to identify the change, its purpose and its effect on sales, costs or quality. A consistent record of such changes gives the firm a basis for planning and gives policymakers a basis for evaluation.

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6. Institutional context of New Uzbekistan. The national strategy for 2022–2026 emphasizes the expansion of the private sector and the improvement of the business environment as parts of a broader development course [1]. Within this course, small business is expected to play a larger role in the diffusion of new technologies and in the regional distribution of economic activity. The effectiveness of this role depends on the coherence of support instruments, the predictability of regulation and the capacity of firms to adopt new practices. These conditions define the framework within which the proposed model is assessed.

7. Sectoral differences. Innovation activity varies across sectors. Firms in manufacturing, information services and food processing often have more opportunities for process and product improvement than firms in retail or personal services, where innovation more frequently takes the form of new marketing and service methods. The OECD analysis indicates that the entry of new firms and the creation of jobs are not evenly distributed across activities, and that dynamism depends partly on exposure to digitalization [2]. Support programs should therefore be adapted to the innovation patterns typical of each sector rather than applied uniformly.

RESULTS AND DISCUSSION

Official statistics show the economic weight of small business in Uzbekistan. The statistical series on the share of small business and private entrepreneurship in gross domestic product reports a preliminary value of about 53.5 percent of gross value added for 2024, which is slightly below the 53.8 percent recorded for 2023 and the 54.3 percent recorded for 2022 [4]. The series is revised in later releases, so the figures should be read as an indication of the scale rather than as exact values. Even with these caveats, the sector accounts for more than half of value added, which makes its innovation capacity a matter of national importance.

Employment indicators point in the same direction. According to the statistical release on small enterprises and microfirms, 471,531 jobs were created in these firms during 2024 [5]. Job creation at this scale shows that small firms are a central source of employment. However, job creation alone does not reveal whether the firms are developing new products or processes. A high share of small firms in the economy can coexist with low innovation intensity if the businesses concentrate on established activities, which is precisely the situation that support policies should address.

The contrast between the economic weight of small business and its innovation intensity is the central issue of the analysis. Small firms generate a large part of value added and jobs, but their potential to introduce innovations remains underused. The barriers identified in comparative research suggest that this gap is not caused by a lack of entrepreneurial effort alone. It reflects structural conditions: limited access to long-term finance, shortages of technical skills and weak connections between firms and research or training institutions [2], [3].

These observations support a model of innovation development built on four elements. The first element is a needs assessment, in which each firm identifies the problem it wants to solve, such as a process bottleneck, a product that does not meet customer requirements or a market it cannot reach. The second element is targeted support, which matches the identified need with a suitable instrument, such as a consultancy service, a pilot-testing facility, access to shared equipment or a credit line for a defined project. The third element is skills development, which trains the owner and employees to plan, test and evaluate innovations. The fourth element is results monitoring, which records whether the innovation was implemented and whether it improved sales, productivity or costs.

The first element directly addresses the information barrier. Many small firms do not systematically analyze their own problems, so the innovation they undertake is often reactive. A short structured diagnostic, repeated annually, can reveal priorities and help the firm decide

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which change is worth the investment. Such diagnostics are inexpensive, and they can be delivered by business support centers, chambers of commerce or training institutions that already work with small firms.

The second element addresses the financial barrier. Innovation projects often involve uncertain outcomes and delayed returns, which makes them unattractive to lenders who require collateral and steady cash flows. Targeted support can reduce this barrier by offering project-based financing with clear milestones, so that funds are released as the project reaches defined stages. Milestone-based financing also gives the firm a discipline that improves the quality of the project.

The third element addresses the skills barrier. Small firms rarely employ dedicated research staff, so the competencies needed for innovation must be developed within the existing workforce. Short training programs on project planning, market testing and simple statistical analysis can equip owners to manage innovation without large organizational changes. Peer learning among firms in the same sector is a low-cost way to spread such competencies.

The fourth element supports learning and accountability. Without monitoring, neither the firm nor the support institution knows whether an innovation has produced the expected result. Monitoring based on the definitions of the Oslo Manual [3] allows the firm to record product, process, marketing and organizational changes consistently, and to compare results across time and across firms. Aggregated monitoring data can also inform policy, because they show which instruments produce measurable effects.

The model can be illustrated with a hypothetical example. Consider a small food-processing firm that employs twelve workers and wants to extend its shelf life for a product. A needs assessment identifies packaging as the bottleneck. Targeted support provides a short technical consultation and access to a shared testing laboratory. A training session on pilot testing helps the owner design a simple trial with two packaging options over six weeks. Monitoring records the change in spoilage rates and the sales of the product after the new packaging is introduced. The example is illustrative, but it demonstrates how the four elements turn a general objective into a concrete and measurable project.

Several limitations should be acknowledged. The analysis relies on aggregated official data and on international comparative studies rather than on a survey of firms in Uzbekistan. Statistical series for small business are revised over time, and the coverage of microfirms may differ from that of larger small enterprises. The proposed model has therefore not yet been tested in a controlled setting. Empirical evaluation with a sample of firms, comparing innovation outcomes before and after the introduction of the model, is the logical next step for future research.

The implementation of the model can follow a stepwise roadmap. In the first stage, the responsible institution selects a pilot group of firms from different sectors and regions, and conducts the initial diagnostics. In the second stage, support packages are designed for each firm on the basis of its diagnostic results, and the financing conditions are agreed in advance. In the third stage, training is delivered to owners and employees, and the first innovation projects are launched under monitoring. In the fourth stage, results are reviewed, lessons are documented and the model is adjusted before it is extended to a larger number of firms. This sequence limits the risk of large-scale failure and produces evidence that can support wider adoption.

Financing deserves particular attention because it links the other three elements. A diagnostic reveals an innovation need, training builds the capacity to meet it, but without financing many projects cannot move beyond the planning stage. Three financing forms are relevant for small firms: grants for pilot testing and feasibility studies, which reduce the initial

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risk; subsidized loans with repayment linked to project results; and guarantees that allow firms without sufficient collateral to access bank credit. Each form suits a different stage of the innovation process. Grants are most useful at the beginning, loans for the commercialization stage, and guarantees for firms that have already proven the viability of their projects. Matching the form of financing to the stage of the project is therefore a central design principle of the model.

The model carries certain risks. The first is that diagnostics become formal exercises, completed to satisfy reporting requirements but not used to guide decisions. This risk is reduced when each diagnostic ends with a concrete action plan that the firm agrees to implement. The second risk is that financing is concentrated in firms that already have the strongest records, which would leave the least innovative firms without support. Setting aside a portion of resources for firms at an early stage of their innovation activity addresses this risk. The third risk is that monitoring becomes a burden on small firms with limited administrative capacity. Simple indicators collected at regular intervals, rather than detailed reports, keep the cost of monitoring within reasonable limits.

The role of the state in this model is that of a coordinator and a provider of common infrastructure rather than a direct manager of firms. Public institutions can finance diagnostics, testing facilities and training, while private banks and technology providers take responsibility for the commercial aspects of projects. Public-private arrangements of this kind distribute risk among the participants and create incentives for each of them to contribute to the success of the firm. The balance between public and private roles should be revised periodically on the basis of monitoring data.

The model also has implications for the design of support institutions. Business support centers, banks and training providers can coordinate their activities around the four elements, so that a firm moves from diagnosis to financing, skills and monitoring without repeating the same procedures in each institution. Such coordination reduces administrative costs for the firm and makes the support system easier to evaluate.

The expected outcomes of the model can be tracked through a limited set of indicators. The first is the share of firms that complete a diagnostic and adopt at least one documented innovation within a year. The second is the change in sales or output attributable to new products and processes, measured against the firm's own baseline. The third is the change in unit cost or quality of production after process innovations. The fourth is the number of owners and employees who complete the training program and apply its methods in their work. Each indicator should be defined consistently with the Oslo Manual so that results can be compared across firms and across years [3]. Reporting these indicators at the regional level would show where the model works best and where additional support is needed.

Inclusiveness is an important dimension of innovation support. Access to training and finance is not always equal across groups of entrepreneurs. The OECD analysis includes a specific examination of the differences in access to entrepreneurship training between women and men [2]. The model should therefore include deliberate outreach to groups that are underrepresented among innovating firms, such as women-led businesses and young entrepreneurs in rural areas. Such outreach can be organized through local business centers and training providers, and its results should be monitored with the same indicators as those used for other firms.

The regional dimension of the model deserves separate attention. Small firms are distributed across regions with different levels of infrastructure, access to markets and availability of skilled labour. A firm in a regional center may benefit from proximity to universities, testing laboratories

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and suppliers, while a firm in a remote district may face higher costs of obtaining the same services. Regional support centers that provide shared facilities, mobile consultations and online training can narrow this difference. The allocation of support resources across regions should take account of the number of microfirms and small enterprises in each region, as reported in official statistics [5], and of their innovation needs.

The international comparison confirms that the challenges identified in this study are not unique to Uzbekistan. Smaller firms in many economies face similar constraints on finance, skills and information, and the OECD's comparative approach shows that the appropriate response combines general framework conditions with instruments that target specific barriers [2]. What distinguishes the Uzbek context is the speed of structural change and the scale of the reform agenda, which make it important to establish firm-level innovation systems early, while the sector is still expanding. The lessons from international practice are most useful when they are adapted to local institutions and firm characteristics rather than transferred directly.

CONCLUSION

Innovation activity in small business entities is a decisive factor for the diversification of the economy and for the creation of productive employment. Small firms already contribute a large share of value added and jobs in Uzbekistan, but their innovation potential is constrained by financial, skills and information barriers. An improved model based on needs assessment, targeted support, skills development and results monitoring offers a practical way to address these barriers. Based on the analysis, the following recommendations are proposed:

first, support institutions should offer standard innovation diagnostics to small firms on a regular basis;

second, financing for innovation projects should be linked to defined milestones rather than to collateral alone;

third, training programs should focus on practical skills such as project planning, pilot testing and simple performance analysis;

fourth, the innovation measures used by firms and statistical bodies should follow the definitions of the Oslo Manual to ensure comparability;

fifth, the effects of support programs should be evaluated with firm-level data so that instruments can be adjusted on the basis of evidence.

From a theoretical perspective, the model treats innovation in small firms as a process of learning rather than as a single investment decision. Each cycle of diagnosis, support, training and monitoring produces information that improves the next cycle. This view is consistent with the emphasis of the Oslo Manual on the systematic collection and use of innovation data [3], which makes learning possible by recording what was tried and what happened. Viewing innovation as a learning process also explains why small firms benefit from repeated, modest projects more than from single large initiatives, since each project builds the skills and information needed for the next.

The contribution of the study lies in linking three elements that are often treated separately: the measurement of innovation, the design of support and the evaluation of results. By placing these elements in a single cycle, the model gives support institutions a way to judge whether their instruments are effective, and it gives firms a way to judge whether their own innovation efforts are paying off. The practical value of this linkage will be greatest where support institutions are willing to revise their programs on the basis of the evidence the cycle produces.

Taken together, these measures form a coherent approach in which the innovation capacity of small firms is developed systematically rather than through isolated initiatives. The approach

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fits the priorities of New Uzbekistan, and its effectiveness can be verified through the monitoring system proposed in this article.

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