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Main directions of development of innovative business financing in Ukraine

Abstract: The article examines the loan market for Ukrainian businesses, highlighting key factors such as demand, supply, external environment, loan portfolio characteristics, and results from previous periods. These factors collectively shape the state of the business loan market, influencing the development of innovative entrepreneurship in Ukraine. The challenges posed by Basel III requirements, such as increased costs for long-term loans, are discussed, revealing the limited availability of project financing. Despite high demand for innovative business financing, the absence of a centralized government agency to coordinate efforts remains a significant barrier. A comprehensive loan market index is proposed to assess the state of financing for innovative businesses, incorporating supply-demand dynamics, external factors, and historical performance. This index enables qualitative evaluation and informs policy development to support entrepreneurship. Several targeted financing programs are outlined, including support for skills and knowledge development, commercialization, prototype creation, and lean manufacturing implementation. Additionally, innovative funding mechanisms such as co-financing and partnerships with microfinance organizations and commercial banks are explored. The study emphasizes the need for centralized coordination and streamlined support systems to address challenges like organizational duplication and unclear program goals. Recommendations include developing a coherent strategy, minimizing regulatory burdens, and leveraging preferential loans for innovative entrepreneurship. These measures aim to enhance access to financial resources, foster innovation, and drive sustainable economic growth in Ukraine.

Keywords: *Innovative business development, digital economy, innovation financing, credit market, project financing, targeted support programs, innovative financial mechanisms, sustainable business development in Ukraine.*

JEL Classification: G21, O32, M13, O16.

Formulas: 0; Figures: 0, Tables: 0

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Introduction. The dynamic evolution of global markets and the increasing complexity of economic processes necessitate the development of innovative approaches to managing business financing. In Ukraine, the challenges of supporting innovative entrepreneurship are further compounded by economic instability and the absence of a centralized framework for facilitating access to financial resources. The state of the loan market, as a fundamental component of financial infrastructure, directly influences the capacity of businesses to innovate and thrive.

In recent years, regulatory frameworks such as Basel III have introduced significant changes to banking practices, particularly by increasing the costs associated with long-term loans. While these measures aim to enhance financial stability, they have inadvertently limited the availability of project financing for businesses that require extended timelines for implementation. As a result, many innovative enterprises face heightened risks and financial constraints, ultimately hindering their growth potential.

The demand for innovative business financing in Ukraine remains high, despite external pressures such as economic crises and geopolitical challenges. However, the lack of coordination among financial institutions and government agencies creates inefficiencies and fragmentation in the support system. This underscores the need for an integrated approach to address these challenges and foster a conducive environment for innovative entrepreneurship.

This article explores the critical role of the loan market in supporting innovative business development. It identifies key factors shaping the market, such as demand, supply, and external conditions, and proposes a comprehensive loan market index to evaluate its dynamics. Furthermore, it outlines targeted financial programs aimed at addressing specific challenges faced by entrepreneurs, including skill development, commercialization, and prototype creation. By addressing these issues, the study seeks to contribute to the development of a robust financial support system for innovation in Ukraine.

Literature Review. The role of financial systems and targeted programs in supporting innovative entrepreneurship has been extensively studied in recent years. The National Academy of Sciences of Ukraine has emphasized the importance of fostering innovation to drive economic growth, detailing the challenges and opportunities for Ukraine in its national report "Innovative Ukraine 2020" [1]. This report highlights the necessity of developing financial mechanisms that align with global trends while addressing Ukraine's unique economic context.

Studies on global financial trends underline the increasing integration of FinTech innovations into capital markets. For example, Solianyuk et al. [6] explored how these technologies can enhance business financing, particularly in the context of digital transformation and globalization. Similarly, the National Bank of Ukraine has articulated a vision for FinTech development by 2025, focusing on cashless transactions, financial literacy, and sustainable innovation [9, 10].

Specific attention has been given to the role of intellectual property management and the commercialization of innovations as critical factors for economic development. Reports by the Ukrainian Institute of Intellectual Property emphasize the need for structured support in these areas [2]. Moreover, international organizations such as the OECD and the World Bank provide statistical insights that are instrumental for comparative analysis and the development of global benchmarks [3, 4].

Homotyuk [5] highlights the potential of innovative financing for businesses amid global changes, emphasizing the need for adaptive financial tools. Additionally, reports by the United Nations Development Programme (UNDP) and the Ministry of Economy of Ukraine focus on innovative investments as a pathway to economic recovery and resilience, especially in post-crisis conditions [7, 8].

Overall, the literature underscores a consistent theme: the development of innovative entrepreneurship requires a coordinated approach that includes financial support, policy alignment,

and the integration of emerging technologies. By addressing these areas, Ukraine can create a conducive environment for innovation and economic growth.

Purpose, Objectives, and Research Methods. This study aims to analyze the current state of the loan market for innovative businesses in Ukraine and propose comprehensive financial tools to support their development. The research explores the interplay between market dynamics, regulatory frameworks, and the needs of innovative enterprises, focusing on how financial mechanisms can be optimized to foster innovation.

The key objectives of the study include:

1. Identifying the factors influencing the loan market for innovative businesses in Ukraine.
2. Assessing the challenges posed by Basel III requirements and their impact on project financing.
3. Developing a loan market index to evaluate the state of business financing and its sensitivity to market changes.
4. Proposing targeted financial programs tailored to the needs of innovative entrepreneurs.

The study employs a mixed-methods approach, combining qualitative analysis of existing literature, regulatory documents, and case studies with quantitative evaluation of market trends. Data sources include reports from Ukrainian and international organizations, statistical databases, and academic publications. This methodological framework ensures a comprehensive understanding of the financial landscape and its implications for innovative entrepreneurship.

Research Results. The state of the loan market for Ukrainian businesses in its comprehensive sense is determined by five key factors: demand, supply, previous periods' results, the external environment and loan portfolio characteristics. These factors form the overall impression of the business of the loan market. If one of them decreases significantly, this leads to a decrease in demand for resources. The interaction of these factors ultimately affects the development of innovative entrepreneurship in the country.

In accordance with the requirements of Basel III, the costs of providing long-term loans for banks are increasing, which also applies to loans for project financing. This reduces the incentive for financial institutions to provide long-term loans. In such circumstances, banks reduce lending terms to 5-8 years, while project financing requires loans for 15-20 years [1]. This leads to the need to refinance the original loans, which increases the risks for borrowers. As a result, there is a threat of significant underfunding of infrastructure and the need to find alternative sources of traditional asset collateral.

Demand for innovative business financing in Ukraine has remained high in recent years, despite the recent economic crisis [2] and the full-scale war. However, Ukraine lacks a government agency that would coordinate the efforts of all relevant organizations to facilitate financing for innovative businesses.

The purpose of any loan market index is to develop a comprehensive indicator that allows for a comprehensive assessment of the state of the loan market for innovative businesses, taking into account existing risks and problems. When calculating this indicator, not only supply and demand factors should be taken into account, but also external factors and the impact of previous results on the current portfolio of small business loans. This approach ensures that the index is highly sensitive to changes in the business lending market and allows for a qualitative assessment of the factors that influence the dynamics of these changes.

The resulting integral indicator (and its components) allows us to assess the dynamics of the financial services market for innovative entrepreneurship as a whole and to understand the nature of the changes taking place in this market. The financial services market includes banks, leasing companies, microfinance organizations, and factoring companies that offer credit products, including project financing.

The final direction of the calculation of the integral indicator is to characterize the aggregate loan portfolio formed taking into account the demand from innovative entrepreneurship and the

supply from financial companies and banks. The main purpose of the portfolio analysis is to obtain objective information about the real needs of the business for further development of programs to support innovative entrepreneurship.

Given practical application of an integral indicator that reflects the demand for resources by entrepreneurship, various funding programs can be developed. These programs will be aimed at supporting and developing innovations, improving human resources, and developing and commercializing innovative products and services in entrepreneurship. Let us consider each of these programs in more detail.

1. Support for the development of skills and knowledge in the field of innovative entrepreneurship.

This program is aimed at supporting start-up inventors, individual entrepreneurs, and small companies that realize the potential for commercializing their intellectual property (IP) - developments, know-how, and knowledge - but do not know how to take the first steps in this direction. Examples of targeted funding for skills and knowledge development include:

1) Business planning:

- creation or finalization of a business plan;
- determining the appropriate organizational and legal form of the future enterprise;
- conducting a risk analysis.

2) Commercialization:

- conducting marketing research;
- development of a marketing strategy;
- creation of an export strategy.

3) Intellectual property management:

- development of an intellectual property protection strategy;
- preparation of a patent application;
- drafting intellectual property licensing agreements.

4) Capital raising:

- development of a proposal for investors and its promotion;
- creating a cost plan to determine the financing needs.

5) Establishing relationships: development of partnership or cooperation agreements with other businesses and organizations.

Financing should not be provided on a 100% basis; the distribution of resources should be in the proportion of 80:20, where 20% is contributed by the entrepreneur and 80% is provided through the loan program. The term of the financing should not exceed 12 months. Potential financial institutions may include microfinance organizations and commercial banks.

2. Assistance in finding qualified managers.

Under this program, entrepreneurs can apply for co-financing to pay for the services of qualified managers, such as CEOs and other specialists. These managers will be able to help an innovative project overcome the initial stage and move to mass production or take a certain market share faster and more efficiently.

This financial product can also be short-term, lasting up to two years, with 50% to 50% co-financing. Potential financial institutions include microfinance organizations and commercial banks.

3. Development of a prototype concept for an innovative product or service. The purpose of this financing program is to assess the feasibility of bringing a new product, service or technology to market.

The main areas of expenditure that may be covered by the loan include:

- labor costs of personnel directly involved in the testing or prototyping process;
- expenses for the services of third-party organizations;
- costs of establishing or renting an enterprise or production facilities;
- costs of creating a prototype of an innovative product or service;

- expenses for the protection of intellectual property;
- other expenses, including project-related travel expenses, training expenses (only if pre-approved in the loan agreement for financing under the commercialization program), and insurance company fees, if they are necessary for the implementation of the innovation project.

The product is provided on a 50% to 50% cost-sharing basis. It is important to note that the purpose of this financial product is to compensate for costs incurred exclusively during the project implementation. For example, during the construction of a plant, only the depreciation of production facilities during the 12 months of project implementation will be financed. Potential financial institutions may include microfinance organizations, leasing companies, and commercial banks.

4. Early stage commercialization funding support.

Under this program, entrepreneurs with a working prototype or idea are provided with funding to bring an innovative product to the mass market. The areas of expenditure that can be covered by the funding generally coincide with the areas of the “proof of concept (prototype development)” program, but also include the full costs of building a pilot plant (if necessary to demonstrate the feasibility of commercializing the product) or innovative production facilities. The product is provided on a 50% to 50% cost-sharing basis. The term of financing can last up to 5 years, subject to successful project implementation. Potential financial institutions include leasing companies and commercial banks.

5. Targeted funding for scientific and applied research.

Entrepreneurs applying for funding must meet the following criteria:

- be registered and do business in Ukraine;
- have a management team and established management processes;
- have been operating for at least 2 years;
- have at least 5 full-time employees;
- be willing to take risks and have an entrepreneurial culture;
- confirm a high level of professionalism in their field;
- have a history of revenue generation and customer base.

Funding under this program effectively provides entrepreneurs with the means to access a large knowledge base and technical skills in exchange for a stake in the company. The main advantage of participating in the program, in addition to support for R&D (research and development), is that there are no restrictions on standard venture capital industry sectors, such as IT and biotechnology. Resources can be provided to virtually any innovative company.

The use of such a program on a partial co-financing basis provides entrepreneurs with access to financial resources for commercialization of innovative developments on an industrial scale. Potential financial institutions include leasing companies, venture capital companies, and commercial banks.

6. Implementation of lean manufacturing principles.

The purpose of this financing program is to continuously improve work processes and technologies at the enterprise according to the lean manufacturing system (the main costs must be justified). The basic principle of the system, discussed in the previous section of the study, can be briefly described as “all processes that do not create value for the end user are redundant and should be abandoned.”

The main reasons for funding:

- identify processes that create added value and remove others;
- improve productivity and reduce the time to launch new products;
- reduce the amount of inventory, freeing up additional financial resources and reducing the need for warehouse space;
- invest in staff, increasing their efficiency;
- create a culture of continuous improvement at the enterprise;

- improve the psychological climate at the enterprise.

The program may involve partial co-financing, and potential financial institutions may include microfinance organizations and commercial banks.

7. Financing ideas from the global expert community.

The purpose of this program is to support innovative entrepreneurship and research organizations in the following areas:

- Assessment of a new idea, technology or market situation;
- solving technological or market problems;
- accelerating the development, improvement or launch of a product;
- assistance in finding suppliers and partners.

The program can provide both full and partial co-financing. Potential financial institutions include microfinance organizations, venture capital companies, and commercial banks.

8. Targeted funding program for start-up innovators.

Funding is intended for companies that want to implement their first R&D project. After receiving the funding, the company must continue its R&D activities and, based on the project results, either launch the product or technology on the market or into production, or conclude that such actions are economically unfeasible.

The main areas of expenditure that can be covered by financing:

- engagement of third-party experts to advise on technical and production issues, such as defect detection and determination of their causes, basic prototyping, and technical feasibility of the project;

- development of an intellectual property protection strategy and plan;
- determination of technical parameters of the product and consumer needs.

Financing should cover at least half of the costs. Potential financial institutions include venture capital companies and commercial banks.

The main purpose of financing these programs is not only to provide project financing or partial financial resources, but also to create favorable conditions for the operation of enterprises and facilitate their access to borrowed resources, in particular through specialized financial programs.

Additional measures could include minimizing regulatory practices, with tax policy towards small and medium-sized enterprises being particularly lenient. Various types of targeted loans (e.g., for the development of innovations) with preferential terms could be used to support the innovation entrepreneurship sector.

The main problems of the system of support for innovative entrepreneurship in Ukraine are the presence of a large number of organizations that often duplicate each other's activities and compete with each other, which makes it difficult to create a simple and understandable support system for entrepreneurs. An equally significant problem is the lack of a coherent and centralized support system: the poor results of innovative business support programs are often not due to poor implementation and lack of control, but to a lack of clear targeting and goal setting. The lack of financial institutions responsible for planning and designing programs to support innovative entrepreneurship is one of the reasons why some of these programs fail to achieve their goals.

Discussion. The findings of this study on the loan market for innovative businesses in Ukraine reveal several significant insights. One key observation is the critical role of a comprehensive and responsive financial infrastructure in supporting innovative entrepreneurship. The proposed loan market index, which accounts for supply-demand dynamics, external factors, and historical data, offers a novel approach to assessing the financial needs of businesses. This aligns with the work of Homotyuk [5], who emphasized the importance of adaptive financial tools in a rapidly changing global economy.

Challenges such as the constraints imposed by Basel III regulations and the lack of long-term project financing echo findings in previous studies [1, 6]. These challenges highlight the need

for innovative solutions, such as targeted financial programs and co-financing mechanisms, to address the specific needs of Ukrainian businesses. The study reinforces the notion that access to financial resources alone is insufficient; effective financial support must also include skill development, commercialization assistance, and prototype creation.

The analysis of targeted financial programs highlights the importance of flexibility and tailored approaches in addressing the diverse needs of innovative entrepreneurs. For instance, the co-financing models proposed in this study are consistent with global best practices in supporting small and medium-sized enterprises (SMEs). However, the research offers a unique perspective by emphasizing the integration of lean manufacturing principles and global expertise, which have been underexplored in the Ukrainian context.

Moreover, the study underscores the fragmented nature of Ukraine's support system for innovative entrepreneurship. The lack of centralized coordination among financial institutions and government agencies leads to inefficiencies and duplication of efforts, a finding consistent with observations by Solianyk et al. [6]. Addressing these structural issues is essential for creating a streamlined and effective support system.

Future research could explore the practical implementation of the proposed loan market index and targeted financial programs, as well as conduct comparative analyses of financing models in different economic contexts. Additionally, further studies are needed to evaluate the long-term impact of these programs on the growth and sustainability of innovative enterprises in Ukraine.

Conclusion. The study underscores the critical importance of a robust and adaptable financial system in fostering innovative entrepreneurship in Ukraine. It highlights that the current state of the loan market, influenced by factors such as demand, supply, regulatory constraints, and external pressures, presents both opportunities and challenges for innovative businesses. The proposed loan market index provides a practical tool for assessing market dynamics and guiding policy interventions aimed at enhancing access to financial resources.

Key findings reveal that regulatory frameworks, particularly Basel III, have increased the costs of long-term project financing, creating significant barriers for businesses that require extended timelines for innovation. The lack of centralized coordination among financial institutions and government agencies exacerbates these challenges, resulting in inefficiencies and fragmented support systems.

The targeted financial programs proposed in the study address critical gaps in the current financial landscape, offering tailored solutions for skill development, commercialization, and prototype creation. These programs emphasize the importance of co-financing mechanisms, integration of lean manufacturing principles, and leveraging global expertise to create a supportive environment for entrepreneurship.

Furthermore, the study highlights the need for a centralized and coordinated approach to financial support, as well as policy reforms to reduce regulatory burdens and streamline access to resources. By implementing these measures, Ukraine can enhance its financial infrastructure and create a conducive ecosystem for innovation.

Future research should focus on the practical implementation of the loan market index and the targeted financial programs, as well as explore their long-term impact on the growth and sustainability of innovative enterprises. Comparative studies of financing models in different economic contexts can provide additional insights into best practices for supporting innovative entrepreneurship.

In conclusion, fostering innovation in Ukraine requires a comprehensive and integrated strategy that combines financial tools, policy alignment, and structural reforms. By addressing the challenges identified in this study, Ukraine can unlock the potential of its innovative entrepreneurs and drive sustainable economic growth.

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Основні напрямки розвитку фінансування інноваційного бізнесу в Україні

Анотація. У статті проаналізовано ринок кредитування українського бізнесу, виокремлено ключові фактори, такі як попит, пропозиція, зовнішнє середовище, характеристики кредитного портфеля та результати попередніх періодів. Ці фактори в сукупності формують стан ринку кредитування бізнесу, впливаючи на розвиток інноваційного підприємництва в Україні. Обговорюються виклики, пов'язані з вимогами Базеля III, такі як збільшення вартості довгострокових кредитів, що свідчить про обмежену доступність проектного фінансування. Незважаючи на високий попит на фінансування інноваційного бізнесу, відсутність централізованого державного органу, який би координував зусилля, залишається значним бар'єром. Для оцінки стану фінансування інноваційного бізнесу запропоновано комплексний індекс кредитного ринку, який враховує динаміку попиту та пропозиції, зовнішні фактори та історичні показники. Цей індекс дає змогу проводити якісну оцінку та формувати політику підтримки підприємництва. Окреслено кілька цільових програм фінансування, включаючи підтримку розвитку навичок та знань, комерціалізації, створення прототипів та впровадження ощадливого виробництва. Крім того, досліджуються інноваційні механізми фінансування, такі як співфінансування та партнерство з мікрофінансовими організаціями та комерційними банками. У дослідженні наголошується на необхідності централізованої координації та впорядкованих систем підтримки для вирішення таких проблем, як організаційне дублювання та нечіткість програмних цілей. Рекомендації включають розробку узгодженої стратегії, мінімізацію регуляторного тягаря та використання пільгових кредитів для інноваційного підприємництва. Ці заходи спрямовані на покращення доступу до фінансових ресурсів, стимулювання інновацій та забезпечення сталого економічного зростання в Україні.

Ключові слова: Інноваційний розвиток бізнесу, цифрова економіка, фінансування інновацій, кредитний ринок, проектне фінансування, цільові програми підтримки, інноваційні фінансові механізми, сталий розвиток бізнесу в Україні.

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