

FROM INNOVATION TO SOCIAL SIGNIFICANCE: THE WAY TO DEVELOP SMALL AND MEDIUM-SIZED TECHNOLOGICAL ENTREPRENEURSHIP

Kramarenko A., PhD in Economics, Associate Professor (V.N. Karazin KhNU)
ORCID: <https://orcid.org/0000-0001-5987-1247>



The article explores the key aspects of the transformation of small and medium-sized technological entrepreneurship from an innovative to a socially significant development model. The relevance of the study is due to the critical gap between the technological potential of modern startups and their ability to solve current social problems. The paper analyzes the theoretical foundations of technological entrepreneurship, defines the characteristics of small and medium-sized technological enterprises as drivers of innovative economic development. Special attention is paid to the transition from a purely technocratic approach to the integration of social significance into the business models of companies. The factors of technological entrepreneurship development are investigated, including internal (management quality, resources, human capital) and external (government support, market environment, startup ecosystem) elements. The practical part of the study is based on the content analysis of 20 Ukrainian technology companies from the FinTech, EdTech, HealthTech and EcoTech sectors. The results revealed systemic contradictions between the emphasis on technological innovation and the lack of social orientation of enterprises. The FinTech and HealthTech sectors demonstrate the dominance of the technocratic approach. The EdTech sector shows a more balanced approach, while EcoTech for the first time demonstrates the excess of environmental aspects over innovative indicators. The study identifies three key barriers to the integration of innovation and social significance: a technocratic focus to the detriment of social impact, a conflict between short-term profitability and long-term sustainability, and a lack of competence in measuring social impact. The proposed recommendations include the introduction of mandatory social impact assessment, the creation of industry standards for social responsibility, the development of social entrepreneurship competencies, and the formation of a national ESG monitoring platform. The need for a systemic transformation of the ecosystem of technological entrepreneurship to realize the potential of social progress and sustainable development is argued.

Keywords: *technological entrepreneurship, innovation, small and medium-sized businesses, sustainable development, social impact.*

ВІД ІННОВАЦІЙНОСТІ ДО СОЦІАЛЬНОЇ ЗНАЧУЩОСТІ: ШЛЯХ РОЗВИТКУ МАЛОГО ТА СЕРЕДНЬОГО ТЕХНОЛОГІЧНОГО ПІДПРИЄМНИЦТВА

Крамаренко А. О., канд. екон. наук, доцент (ХНУ ім. В. Н. Каразіна)

Стаття досліджує ключові аспекти трансформації малого та середнього технологічного підприємництва від інноваційної до соціально значущої моделі розвитку. Актуальність дослідження обумовлена критичним розривом між технологічним потенціалом сучасних стартапів і їх здатністю вирішувати актуальні

соціальні проблеми. У роботі проаналізовано теоретичні основи технологічного підприємництва, визначено характеристики малих та середніх технологічних підприємств як драйверів інноваційного розвитку економіки. Особливу увагу приділено переходу від суто технократичного підходу до інтеграції соціальної значущості в бізнес-моделі компаній. Досліджено фактори розвитку технологічного підприємництва, включаючи внутрішні (якість управління, ресурси, людський капітал) та зовнішні (державна підтримка, ринкове середовище, екосистема стартапів) елементи. Практична частина дослідження заснована на контент-аналізі 20 українських технологічних компаній з секторів FinTech, EdTech, HealthTech і EcoTech. Результати виявили системні протиріччя між акцентом на технологічні інновації та недостатньою соціальною орієнтованістю підприємств. FinTech і HealthTech сектори демонструють домінування технократичного підходу. EdTech сектор показує більш збалансований підхід, тоді як EcoTech вперше демонструє перевищення екологічних аспектів над інноваційними показниками. Дослідження визначає три ключові бар'єри інтеграції інноваційності та соціальної значущості: технократичний фокус всупереч соціальному впливу, конфлікт між короткостроковою прибутковістю і довгостроковою стійкістю, відсутність компетенцій в області вимірювання соціального ефекту. Запропоновані рекомендації включають впровадження обов'язкової оцінки соціального впливу, створення галузевих стандартів соціальної відповідальності, розвиток компетенцій соціального підприємництва і формування національної платформи моніторингу ESG-показників. Аргументовано необхідність системної трансформації екосистеми технологічного підприємництва для реалізації потенціалу соціального прогресу та сталого розвитку.

Ключові слова: технологічне підприємництво, інновації, малий та середній бізнес, сталий розвиток, соціальний вплив.

Problem statement. Modern technological entrepreneurship is faced with a fundamental contradiction between the desire for innovative leadership and the need to ensure the social significance of business. Small and medium-sized technology companies, being the drivers of the digital transformation of the economy, demonstrate a critical gap between technological innovation and social impact [1; 2]. The problem is particularly acute in the context of global challenges, when society expects business not only to achieve economic results, but also to solve urgent social and environmental problems. The technocratic approach that dominates most tech startups leads to the creation of technologically advanced but socially isolated solutions, which limits their long-term sustainability and scalability [3]. The lack of competencies in measuring social impact and the lack of systematic approaches to integrating commercial and public interests create

barriers to the transformation of innovations into socially significant solutions.

Analysis of the latest research and publications. Research in the field of technological entrepreneurship and social impact demonstrates a growing scientific interest in the problem of integrating innovation and social responsibility. The works of foreign authors focus on the concepts of «social entrepreneurship» and «sustainable innovation», exploring the mechanisms of creating social value through technological solutions [4; 5]. Considerable attention is paid to social impact assessment methodologies, including SROI (Social Return on Investment) and B Impact Assessment [1]. The authors of scientific publications mainly analyze certain aspects of the development of small and medium-sized businesses, paying insufficient attention to the complex analysis of the relationship between innovation potential and social significance [6]. Existing publications often

view technological entrepreneurship through the prism of economic efficiency, ignoring its potential to solve social problems [7]. There is no systematic analysis of barriers and success factors in the transformation of tech startups from purely commercial to socially oriented enterprises.

Despite the growing interest in the issue of socially responsible entrepreneurship, a number of critical aspects remain unexplored. There is a lack of comprehensive methodology for assessing the readiness of technology companies to integrate a social mission into a business model. The specific barriers and catalysts of social transformation in various tech sectors (FinTech, EdTech, HealthTech, EcoTech) have not been sufficiently studied. There is a lack of empirical research on successful cases of the transition from a technology-first to an impact-first approach in small and medium-sized technological entrepreneurship.

The purpose of the article is to study the transformation of small and medium-sized technological entrepreneurship from an innovative to a socially significant development model, identifying key factors, problems and opportunities in the implementation of this process.

Presentation of the main research material. Technological entrepreneurship, especially in the segment of small and medium-sized businesses, is one of the dynamically developing areas of the modern economy. It combines the creation, development and commercialization of technological innovations that can significantly affect the socio-economic development of society [2; 4]. Technological entrepreneurship is based on the active use of scientific and technological potential and innovative approaches to create new products, services and business models.

Small and medium-sized technological businesses are entrepreneurial structures focused on the development and implementation of new technologies, products and solutions based on scientific discoveries and innovative ideas. The main

difference between such enterprises is their flexibility, the ability to quickly adapt to market changes and the intensive use of technology to increase efficiency [1; 8].

The main characteristics of small and medium-sized technology businesses include:

- innovation focus: Focus on creating new or improved products, processes, and services.
- limited scale: small number of employees and limited capital compared to large corporations.
- high level of risk: the innovative nature of the activity is associated with uncertainty and instability of the market environment.
- flexibility and mobility: quick response to changing needs and market conditions.
- intensive use of knowledge: relying on scientific and technical knowledge and qualified personnel.

These characteristics allow small and medium-sized technological enterprises to play a key role in the innovative development of the economy, especially in the context of global digitalization and technological transformation of various industries [9].

Innovation is the main driver of technological entrepreneurship growth, forming the basis of competitiveness and sustainable development. At the same time, technological innovations play a special role, which include the introduction of new materials, software, biotechnologies and other advanced scientific achievements [1; 4]. They often require significant investments in research and development, but based on this small and medium-sized enterprises are able to create breakthrough solutions that promote technological progress and socio-economic development [10; 11].

Modern technological entrepreneurship goes beyond solely economic efficiency and innovative growth. The key trend is the strengthening of the social importance of business, especially small and medium-sized technological enterprises, which are able not only to create new technologies, but also to

solve pressing social problems, improve the quality of life and stimulate the sustainable development of society [4; 5]. The social significance of entrepreneurial activity is the contribution of business to improving social well-being, developing human capital and solving social problems. This phenomenon involves the creation of values that go beyond economic benefits and include ethical, environmental, and humanitarian aspects.

At the same time, it is innovation that acts not only as a tool for competitiveness, but also as a means of achieving social goals. The introduction of new technologies can lead to significant social changes and improved living conditions [2; 4].

The relationship between innovation and social effects is evident in several key areas:

- technologies for health and well-being. The creation of medical devices, biotechnological drugs, and digital platforms for telemedicine contributes to improving access to high-quality medical services.

- educational innovations. The development of educational technologies and online platforms expands the opportunities for obtaining knowledge for different segments of the population, promotes the development of skills and professional development of personnel.

- environmental innovations. The introduction of energy-efficient and environmentally friendly solutions helps to solve environmental pollution problems and reduce the carbon footprint of enterprises.

- inclusive technologies. The development of specialized products and services that ensure accessibility for people with disabilities promotes social integration.

Thus, innovative solutions become a tool through which technology businesses not only benefit economically, but also create social value, improving the quality of life and sustainability of society.

The successful development of small and medium-sized technological enterprises is a complex multifactorial process in which various internal and external elements

interact. Understanding these factors is critically important for forming an effective strategy for the development of technology companies and creating a favorable ecosystem for their growth [12; 13].

The quality of management is a fundamental internal factor determining the trajectory of a technological enterprise. Effective strategic planning allows companies not only to adapt to rapidly changing market conditions, but also to anticipate technological trends. Management's ability to make decisions in the face of uncertainty typical of high-tech industries is of particular importance. Modern technology enterprises require flexible management approaches capable of ensuring rapid product iteration and adaptation to user feedback. The introduction of agile methodologies and lean approaches is becoming a critical factor in competitiveness [14]. The quality of corporate governance also includes the development of an organizational culture conducive to innovation and the creation of effective employee motivation systems.

Accessibility and effective resource management determine the capabilities of technology enterprises for development and scaling [12; 13]. Financial resources remain a critical constraint for most startups and growing technology companies. The ability to attract investments at various stages of development - from seed financing to venture capital - directly affects the growth rate and opportunities to enter new markets. Access to modern information technologies and platforms is of particular importance, which can significantly reduce barriers to market entry and speed up the product development process.

The quality of human resources is perhaps the most critical internal factor for technology enterprises. Highly qualified specialists in the field of technology, marketing, sales and management determine the innovative potential of the company [14]. Employees with an entrepreneurial mindset, who are able to work in conditions of high

uncertainty and are ready for continuous learning, are of particular value. Forming effective teams requires not only attracting talented specialists, but also creating an environment conducive to their retention and development. The interdisciplinarity of teams and the ability to collaborate between different functional areas are also critical to success.

The role of the state in the development of technological entrepreneurship is multifaceted and includes the creation of a favorable regulatory environment, direct financial support and the formation of an institutional infrastructure. Tax incentives for research and development, simplified intellectual property registration procedures and reduced administrative barriers create the foundation for the development of innovation activities [15]. Government startup support programs, including grants, soft loans, and co-financing of private investments, play a particularly important role in the early stages of technology companies' development. Government support for the export of technological products and access to international markets is also an important aspect.

The characteristics of the market significantly affect the development opportunities of technological enterprises. The size and structure of the market, the level of competition, barriers to entry and the speed of consumer adoption of innovations determine the strategic capabilities of companies. Of particular importance is the market's willingness to adopt new technologies and the digital maturity of consumers [12; 16]. The presence of a well-developed e-commerce infrastructure, digital payment systems and logistics networks creates favorable conditions for technology startups. The availability of skilled labor and competition for talent are also shaping the market environment for technology companies.

A well-developed startup ecosystem includes many interrelated elements: investors, mentors, service providers,

educational institutions, and business communities. The presence of an active venture capital community, business angels, and crowdfunding platforms provides access to financing at various stages of development. Professional services, including legal support, consulting, and marketing services tailored to the needs of startups, reduce transaction costs and risks.

Proximity to research universities provides access to the latest scientific developments and qualified personnel. Network effects within clusters contribute to the formation of value chains and the development of partnerships [12]. Competition and cooperation between cluster members stimulate innovation activity and accelerate technology diffusion.

Corporate incubators and corporate venture capital programs create additional opportunities for technology startups by providing access to the resources of large companies, their customer base and distribution channels. Such cooperation facilitates faster scaling of innovative solutions and their implementation in existing industries.

The effective interaction of all these factors creates a favorable environment for the transformation of technology startups into socially significant enterprises capable not only of generating profits, but also of solving important social problems through innovative technological solutions.

The development of small and medium-sized technological enterprises in Ukraine demonstrates significant progress despite difficult socio-economic and geopolitical conditions. Ukrainian technology companies not only implement innovative solutions, but also make an important contribution to the socio-economic development of the regions. During the study an analysis of specific examples with consideration of innovative and social significance was provided. The following criteria were used for the analysis:

1. The level of technological innovation, which is the degree of originality and technological novelty that a company

implements to solve social or environmental problems, as well as the extent to which new technologies or methods can improve the efficiency or accessibility of services.

2. The social significance of products, which is an assessment of how much the company's activities benefit society in the form of improving the quality of life, health, education, ecology or financial accessibility. It is important to what extent the company's activities contribute to solving urgent social problems and ensure the availability of various benefits for vulnerable groups of the population.

3. Scale and sustainability of a business - the ability of a business to expand its impact to a large audience, regions and social groups, including the level of market penetration and scaling potential without losing the quality of the social mission. At the same time, the financial stability of the business, the availability of investments, and the ability to adapt to crises and challenges should be taken into account.

4. Involvement in the development of the local community, which describes the presence of a stable business model that ensures the long-term functioning of the company without prejudice to the social mission, as well as the ratio of costs and created social value. The degree of involvement in volunteer, charitable or educational initiatives, job creation and human capital development is considered.

5. Environmental and ethical responsibility - the level of openness of the company regarding the use of resources, achievements and effects of its activities, including the availability of monitoring and evaluation systems for social impact. It takes into account the use of the principles of sustainable development, ethical production and transparency of processes, minimization of the ecological footprint.

20 Ukrainian technology companies were selected for the study - 5 companies each from the FinTech, EdTech, HealthTech, EcoTech sectors. With the help of digital tools, a content analysis of the official web pages of companies was carried out to search for keywords: 1) innovations; 2) social; 3) sustainable; 4) community; 5) environment. Each of these keywords corresponds to the analysis criteria described above. Let's consider the results obtained separately for each field of activity.

FinTech companies:

1. Goalsetter - platform for financial education and family finance.
2. DMarket - platform for trading gaming assets.
3. Monobank - the first mobile bank in Ukraine, without physical branches.
4. Reface Pay - a platform for instant payments and financial services.
5. Finmap - an online financial management service for small businesses.

Table 1

Content analysis results for FinTech companies

	Innovations	Social	Sustainable	Community	Environment
Goalsetter	10	8	5	6	4
DMarket	8	3	2	4	2
Monobank	12	7	3	5	3
Reface Pay	7	3	1	2	1
Finmap	6	4	3	3	2
Total	43	25	14	20	12

Source: developed by the author based on corporate web sites

The results demonstrate the classic dilemma of the FinTech sector: a high focus on technological innovation with a relatively low focus on social impact. The ratio of

«Innovations» to «Social» is 1.72:1, which indicates the predominance of a technocratic approach over a socially oriented one. The «Sustainable» category occupies the middle

position (14 mentions, 12.2%), which indicates a transitional stage in the development of the industry. Companies are beginning to realize the importance of sustainable development, but they have not yet integrated these principles into their core communication strategy. «Community» shows 20 mentions (17.4%), which is higher than sustainability indicators, but lower than social orientation. This indicates an understanding of the importance of building user communities, especially in the digital economy.

EdTech Companies:

1. Prometheus - an online platform with free courses.
2. EdEra - online courses for schools and universities.
3. Mate academy - teaches IT specialties with subsequent employment.
4. GIOS - an interactive platform for learning mathematics.
5. GoIT - an online school of programming and digital professions.

Table 2

Content analysis results for EdTech companies

	Innovations	Social	Sustainable	Community	Environment
Prometheus	25	10	15	7	8
EdEra	6	9	4	8	3
Mate academy	5	7	2	6	1
GIOS	2	3	1	3	0
GoIT	8	5	4	5	2
Total	46	34	26	29	14

Source: developed by the author based on corporate web sites

The EdTech sector demonstrates a natural inclination towards social responsibility. The educational mission promotes the formation of long-term relationships with users, the creation of sustainable learning communities, and a focus on public benefit. The ratio of «Innovations» to «Social» is 1.35:1, which is significantly better than many other tech sectors. This indicates a more balanced approach to technology development, taking into account the social impact. High rates of «Community» (19.5%) indicate an understanding of the importance of peer-to-peer learning, networking between participants, and the formation of professional communities. The EdTech sector of Ukraine demonstrates a mature approach to integrating social responsibility into the business model. Educational specifics contribute to the natural development of socially significant initiatives, community building and long-term thinking. The key achievements of the sector are a high level of

social orientation, a developed ecosystem of communities, and a balanced approach to innovation and social impact. The main challenges are the uneven development between leaders and other players and the need to measure and document the social impact. The EdTech sector can serve as a social responsibility benchmark for other technological industries in Ukraine, demonstrating a successful model for integrating commercial goals with public benefit.

HealthTech Companies:

1. Cardiomo - wearable devices for monitoring the state of the heart.
2. SkinVision - skin check for melanoma.
3. ComeBack Mobility - sensors for rehabilitation after injuries.
4. Impulsis - development of medical software and telemedicine solutions.
5. Ucare - a platform for remote monitoring of patients.

Table 3

Content analysis results for HealthTech companies

	Innovations	Social	Sustainable	Community	Environment
Cardiomo	4	1	2	1	1
SkinVision	5	2	3	1	3
ComeBack Mobility	6	3	1	1	0
Impulsis	7	2	3	1	1
Ucare	4	1	2	1	1
Total	26	9	11	5	6

Source: developed by the author based on corporate web sites

HealthTech demonstrates a fundamental contradiction: the industry with the maximum potential for social impact shows minimal indicators of social communication. The ratio of «Innovations» to «Social» is a critical 2.89:1. Companies focus on the technical aspects of medical solutions, ignoring accessibility for vulnerable groups of the population, reducing social inequality in healthcare, and forming supportive patient communities. With the exception of SkinVision, the sector demonstrates zero understanding of environmental responsibility in healthcare. The HealthTech sector of Ukraine is in a state of deep contradiction between objectively high social potential and critically low ability to articulate and realize it. The HealthTech

sector needs a fundamental transformation of its approach: from technocratic to socially oriented, from product-based to ecosystem-based, from short-term to sustainable.

EcoTech Companies:

1. FarmFleet - a specialized online service for optimizing business processes in the market of drone sprayers and service business in agriculture.

2. Agrohub - sustainable agricultural technologies.

3. Eco Challenge - a platform for supporting environmental initiatives.

4. GreenTech - waste management and recycling.

5. Releaf Paper - produces paper from fallen leaves.

Table 4

Content analysis results for EcoTech companies

	Innovations	Social	Sustainable	Community	Environment
FarmFleet	3	0	1	1	1
Agrohub	10	2	5	2	3
Eco Challenge	7	4	8	5	10
GreenTech	2	1	4	1	7
Releaf Paper	5	1	9	0	12
Total	27	8	27	9	33

Source: developed by the author based on corporate web sites

EcoTech demonstrates a fundamental paradigm shift: for the first time, environmental aspects (31.7%) outperform innovation (25.9%). This indicates a mature understanding of environmental challenges, the transition from a tech-first to an impact-

first approach, and the authenticity of the environmental mission. The huge spread of indicators between companies indicates the lack of uniform communication standards, different maturity of understanding of social responsibility and the need for sector-wide

best practices. Thus, the EcoTech sector represents a unique case of sector-wide environmental awareness with a critical underutilization of social potential. EcoTech has a unique opportunity to become a leader in sustainable technology development. This requires a shift from a pure environmental focus to a holistic sustainability approach that includes social impact and community engagement. The sector is on the verge of transformation into an integrated ecosystem of solutions for sustainable development that can become a model for other countries and regions.

Thus, three key barriers to the integration of innovation and social significance have been identified: a technocratic focus at the expense of social impact, a conflict between short-term profitability and long-term sustainability, and a lack of competence in measuring and scaling social impact. Overcoming these challenges requires systemic changes in approaches to financing, regulation and development of human capital in the field of technological entrepreneurship.

Based on the results of the content analysis of Ukrainian technology companies and the identified systemic problems, a set of measures can be proposed to integrate innovation and social significance in the development of small and medium-sized technological enterprises. The strategic recommendations aim to overcome the technocratic approach and create sustainable ecosystems of social impact.

The primary task is to transform the approach from pure-tech to a social-tech development model. The analysis showed that even the EdTech sector, which shows the best ratio of innovation to social impact (1.35:1), has significant potential for improvement. The key strategy should be the integration of social impact measurement at all stages of the innovation process. It is recommended to introduce a mandatory social impact assessment for technology startups receiving government support. Companies should demonstrate clear metrics

of their impact on solving social problems using recognized methodologies. This is especially critical for the HealthTech sector, where the ratio of innovation to social impact is 2.89:1.

It is necessary to create sector-specific social standards. EdTech companies should focus on digital inclusion and equal access to education, FinTech on financial inclusion of vulnerable groups, and HealthTech on reducing inequality in access to medical care. The low indicators of the «Community» category in all sectors (8.7-19.5%) indicate the need for a radical revision of approaches to user interaction. Companies should consider moving from transactional to relational models, creating sustainable ecosystems of stakeholders. Digital technologies can become a catalyst for sustainable development. The results show that even the EcoTech sector, which is the leader in environmental responsibility (31.7% of mentions), critically underutilizes the potential for social impact (7.7%). It is necessary to integrate the principles of circular economy and social innovation into the core business models of technology companies.

Special attention should be paid to the development of green tech competencies. Critically low indicators of the «Environment» category in FinTech (10.4%), EdTech (9.4%) and HealthTech (10.5%) indicate a systemic disregard for climate impact. It is necessary to introduce mandatory carbon footprint assessment for all technological solutions and stimulate the development of climate-positive innovations.

The development of human capital in the field of social entrepreneurship is critically important. It is recommended that courses on social impact measurement, sustainable business models, and community engagement be integrated into the curricula of technical universities. It is necessary to create specialized acceleration programs for social tech startups. Cross-sector collaboration between tech companies, NGOs, and government institutions should be

encouraged. The low rates of social partnership indicate the underutilized potential of collaborative innovation to solve social problems. Successful examples of the type of public-private partnership in the digitalization of education should be scaled to other areas.

The integration of innovation and social significance requires a systemic transformation of the ecosystem of technological entrepreneurship. The key areas should be: the introduction of social impact measurement, the development of community-driven business models, the creation of impact financing tools and the formation of a regulatory framework that stimulates social innovation. Only an integrated approach will make it possible to realize the potential of Ukrainian technology companies for sustainable development and social progress.

Conclusions. Small and medium-sized technological entrepreneurship is a key driver of innovative development and economic transformation in the context of digitalization and global challenges. Such enterprises have high flexibility, the ability to quickly adapt to market changes, and also intensively use scientific and technical knowledge to create breakthrough technologies. However, a study of Ukrainian technology companies revealed a systemic mismatch between an emphasis on technological innovation and a lack of focus on social impact. The fields of FinTech and HealthTech demonstrate the dominance of a technocratic approach, where innovation is perceived as a goal in itself, while social mission and sustainability remain in the background. At the same time, EdTech and EcoTech show a more mature approach, where social responsibility and environmental sustainability occupy a significant place, gradually mixing with innovation.

The social importance of small and medium-sized technology businesses is expressed in job creation, the development of affordable innovative products, the introduction of «green» technologies and the

support of local communities. It has been established that the successful development of tech startups is impossible without integrating social impact in the early stages, which improves investor and user confidence, expands markets and contributes to the formation of sustainable ecosystems. Social performance measurement and sustainable development indicators is becoming a key tool. However, most companies are not using these approaches yet, which creates barriers to scaling socially significant innovations.

It is especially important to form a balanced development model that harmoniously combines innovation, social significance and environmental responsibility. Such a transition requires a change in corporate culture, improved management, human capital development, and active government support through regulatory measures and financial instruments. Accelerators, incubators, and educational programs focused on building social entrepreneurship and impact measurement competencies play an important role.

The prospects for the development of SMEs are related to the transformation of technological enterprises from purely technological to socially oriented businesses capable of solving urgent social problems and stimulating sustainable development. This requires comprehensive measures to establish industry standards of social responsibility, create platforms for monitoring and evaluating social impact, promote cross-sectoral cooperation and integrate the principles of social inclusion and environmental sustainability into the basis of business models.

Thus, the path from innovative technologies to social significance is an integral stage in the evolution of small and medium-sized technological enterprises, which will strengthen the role of technology business as a driver of social progress and sustainable development of society.

ПЕРЕЛІК ВИКОРИСТАНИХ

ДЖЕРЕЛ:

1. Raman R., Alka T. A., Suresh M., Nedungadi P. (2025) Social entrepreneurship and sustainable technologies: Impact on communities, social innovation, and inclusive development. *Sustainable Technology and Entrepreneurship*. Vol. 4, № 3. URL: <https://www.sciencedirect.com/science/article/pii/S277303282500015X>.
2. Si S., Hall J., Suddaby R., Ahlstrom D., Wei J. (2023) Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*. Vol. 119. URL: <https://www.sciencedirect.com/science/article/abs/pii/S0166497222000311>.
3. Klein A. Z., Pedron C., Elaluf-Calderwood S., Picoto W. N. (2024). Digital entrepreneurship and the challenges for social change. *Brazilian Administration Review*. Vol. 21(4). URL: <https://doi.org/10.1590/1807-7692bar2024240192>.
4. Guatemala A., Martínez G. (2023) Technological capabilities in emerging social enterprises: A pathway to social impact. *Región Científica*. Vol. 2, № 2. URL: <https://doi.org/10.58763/rc2023111>.
5. Dettori A., Floris M. (2021) Technology in social entrepreneurship studies: a bibliometric analysis (1990-2019). *International Journal of Business and Management*. Vol. 16, № 3. URL: <https://doi.org/10.5539/ijbm.v16n3p41>.
6. Leitão M. E., Amaral M., Carvalho A. (2024) Reconceptualizing socio-tech entrepreneurship: A systematic literature review and research agenda. *Technovation*. Vol. 134. URL: <https://doi.org/10.1016/j.technovation.2024.103018>.
7. Klarin A., Suseno Y. (2022). An integrative literature review of social entrepreneurship research: Mapping the literature and future research directions. *Business & Society*, Vol. 62, № 3. URL: <https://journals.sagepub.com/doi/full/10.1177/00076503221101611>.
8. Zare L., Ben Ali M., Rauch E., Matt D. T. (2025) Navigating challenges of small and medium-sized enterprises in the Era of Industry 5.0. *Results in Engineering*, Vol. 27. URL: <https://doi.org/10.1016/j.rineng.2025.106457>.
9. Prokopenko O., Chechel A., Koldovskiy A., Kidiashvili M. (2024) Innovative Models of Green Entrepreneurship: Social Impact on Sustainable Development of Local Economies. *Economics. Ecology. Socium*, Vol. 8, № 1. URL: <https://doi.org/10.61954/2616-7107/2024.8.1-8>
10. FasterCapital. How can technology drive innovation in social entrepreneurship? URL: <https://www.fundsforngos.org/all-questions-answered/how-can-technology-drive-innovation-in-social-entrepreneurship/>.
11. Calderini M., Chiodo V., Gerli F., Pasi G. The centrality of social-tech entrepreneurship in an inclusive growth model. *Social Economy Science: Transforming the Economy and Making Society More Resilient*. Oxford: Oxford Academic, 2023. P. 284–308. URL: <https://doi.org/10.1093/oso/9780192868343.003.0012>
12. Rankhumise E. M. (2022) Factors contributing to business success: evidence from small and medium-size enterprise owners. *International Journal of Entrepreneurship*, Vol. 26, № 1. P. 1–10.
13. Navarathne K. A. S. (2023) An exploratory case study of the factors hindering the success of small and medium enterprises. *Journal of Small Business Strategy*, Vol. 33, № 2. P. 53–63.
14. Sitharam S., Hoque M. (2016) Factors affecting the performance of small and medium enterprises in KwaZulu-Natal, South Africa. *Problems and Perspectives in Management*. Vol. 14, № 2. P. 277–288.
15. Mizgajska H., Wsciubiak L. (2025) Factors of collaboration between small and medium-sized enterprises (SMEs) and research entities in Poland – the path to

success. *Journal of Management Studies*. Vol. 62, № 2. P. 427–449. URL: <https://doi.org/10.13166/jms/207589>.

16. Battistella C., Attanasio G., Pillon R. (2025) Critical success factors for the implementation of technology roadmapping in small-medium enterprises clusters. *Journal of Engineering and Technology Management*. Vol. 77. URL: <https://www.sciencedirect.com/science/article/pii/S0923474825000438>.

REFERENCES:

1. Raman R., Alka T. A., Suresh M., Nedungadi P. (2025) Social entrepreneurship and sustainable technologies: Impact on communities, social innovation, and inclusive development. *Sustainable Technology and Entrepreneurship* (electronic journal), vol. 4, no. 3. Available at: <https://www.sciencedirect.com/science/article/pii/S277303282500015X> (accessed 21 September 2025).

2. Si S., Hall J., Suddaby R., Ahlstrom D., Wei J. (2023) Technology, entrepreneurship, innovation and social change in digital economics. *Technovation*. (electronic journal), vol. 119. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0166497222000311> (accessed 21 September 2025).

3. Klein A. Z., Pedron C., Elaluf-Calderwood S., Picoto W. N. (2024). Digital entrepreneurship and the challenges for social change. *Brazilian Administration Review* (electronic journal), vol. 21(4). Available at: <https://doi.org/10.1590/1807-7692bar2024240192> (accessed 21 September 2025).

4. Guatemala A., Martínez G. (2023) Technological capabilities in emerging social enterprises: A pathway to social impact. *Región Científica* (electronic journal), vol. 2, no. 2. Available at: <https://doi.org/10.58763/rc2023111> (accessed 21 September 2025).

5. Dettori A., Floris M. (2021) Technology in social entrepreneurship studies: a bibliometric analysis (1990-2019).

International Journal of Business and Management (electronic journal), vol. 16, no. 3.

Available at: <https://doi.org/10.5539/ijbm.v16n3p41> (accessed 21 September 2025).

6. Leitão M. E., Amaral M., Carvalho A. (2024) Reconceptualizing socio-tech entrepreneurship: A systematic literature review and research agenda. *Technovation* (electronic journal), vol. 134. Available at: <https://doi.org/10.1016/j.technovation.2024.103018> (accessed 21 September 2025).

7. Klarin A., Suseno Y. (2022). An integrative literature review of social entrepreneurship research: Mapping the literature and future research directions. *Business & Society* (electronic journal), vol. 62, no. 3. Available at: <https://journals.sagepub.com/doi/full/10.1177/00076503221101611> (accessed 21 September 2025).

8. Zare L., Ben Ali M., Rauch E., Matt D. T. (2025) Navigating challenges of small and medium-sized enterprises in the Era of Industry 5.0. *Results in Engineering* (electronic journal), vol. 27. Available at: <https://doi.org/10.1016/j.rineng.2025.106457> (accessed 21 September 2025).

9. Prokopenko O., Chechel A., Koldovskiy A., Kidiashvili M. (2024) Innovative Models of Green Entrepreneurship: Social Impact on Sustainable Development of Local Economies. *Economics. Ecology. Socium* (electronic journal), vol. 8, no 1. Available at: <https://doi.org/10.61954/2616-7107/2024.8.1-8> (accessed 21 September 2025).

10. FasterCapital (2024) How can technology drive innovation in social entrepreneurship? Available at: <https://www.fundsforngos.org/all-questions-answered/how-can-technology-drive-innovation-in-social-entrepreneurship/> (accessed 21 September 2025).

11. Calderini M., Chiodo V., Gerli F., Pasi G. (2023) The centrality of social-tech entrepreneurship in an inclusive growth model. *Social Economy Science: Transforming the Economy and Making*

Society More Resilient. Oxford: Oxford Academic, pp. 284–308.

12. Rankhumise E.M. (2022) Factors contributing to business success: Evidence from small and medium-size enterprise owners. *International Journal of Entrepreneurship*, vol. 26, no. 1, pp. 1–10.

13. Navarathne K. A. S. (2023) An exploratory case study of the factors hindering the success of small and medium enterprises. *Journal of Small Business Strategy*, vol. 33, no. 2, pp. 53-63.

14. Sitharam S., Hoque M. (2016) Factors affecting the performance of small and medium enterprises in KwaZulu-Natal, South Africa. *Problems and Perspectives in Management*, vol. 14, no. 2, pp. 277–288.

15. Mizgajska H., Wsciubiak L. (2025) Factors of collaboration between small and medium-sized enterprises (SMEs) and research entities in Poland – the path to success. *Journal of Management Studies* (electronic journal), vol. 62, no. 2, pp. 427–449. Available at: <https://doi.org/10.13166/jms/207589> (accessed 21 September 2025).

16. Battistella C., Attanasio G., Pillon R. (2025) Critical success factors for the implementation of technology roadmapping in small-medium enterprises clusters. *Journal of Engineering and Technology Management* (electronic journal), vol. 77. Available at: <https://www.sciencedirect.com/science/article/pii/S0923474825000438> (accessed 21 September 2025).