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CONCEPTUAL MODEL OF UKRAINIAN INDUSTRIAL FACILITIES FUNDING WITH VENTURE CAPITAL

SWOT-analysis carried out for industrial facilities being subjects of venture activity investment environment allowed to distinguish benefits and burdens of each of them, which can be used when targeting investors at various stages of venture project implementation. Analyzed scheme of relationships between investor and venture company made it possible to identify major features of the conceptual model of industrial facilities funding with venture capital. Conceptual model of industrial facilities venture capital funding has been offered considering domestic particularities of the process.

Key words: venture, industrial facilities, investments, venture capital financing, SWOT-analysis, model.

Articulation of issue in general and its connection with the important scientific and participant activities. Underdeveloped infrastructure of venture, innovative and investment activities in Ukraine, the shortage of experienced and qualified professionals to manage venture projects, and lack of state strategy and support of innovative and consulting activities make the issue of domestic industrial facilities venture capital issues' research and scientific study pending.

Analysis of resent researches and published papers laying the foundation for above stated issue solution, which were relied upon by the author. Scientists and experts extensively studied investment issues to the various business fields.

Thus, Yershova G.V. [1, p.12] in her thesis research analyzes the roles of development institutions in industrial facilities' capital assets capital investment and puts forward additional arguments in favor of expediency to establish strong bank of development to support facilities (in particular industrial ones) based on one of the state owned banks and forward state investment resources into economics through it.

Popov S.F. [2, p.7] notes that the analysis of potential and diverse sources of knowledge-intensive technologies commercialization and transfer funding indicates

the potential of venture capital funding methods to ensure market entry of technologies developed in Institution of Higher Education/Scientific Research Institute at the expense of state budget.

Shylo L.A. [3, C.5] analyzed iron and steel works venture capital funding and stated that it stimulates innovative process not only through new machinery and process introduction to manufacture. Innovative sphere effectiveness facilitation and capital stock cheapening based on that compared to the other types of manufacturing resource is also of major importance.

However, investments to venture projects stand out by their nature and mechanisms. Various aspects of venture capital funding have been researched by the following scientists: Vasylyeva T.A., [4] Koretska-Garmash V.O. [5], Matey V.V. [6], Taradayko D.O. [7], Yanchenko Z.B. [8] and others.

In particular, Vasykyeva T.A. identified general directions and financial mechanisms of state and banks relationship transformation under conditions of countrywide program of venture business development in Ukraine [4]; Matey V.V. investigated financial and organizational arrangement of venture capital market development in Ukraine [6].

Outstanding issues which are considered in the present paper and are the part of general problem. Key feature distinguishing industrial facilities' venture from other kinds of business activities (in the first instance innovative one) is its investment pattern. In such a way manufacturers introducing venture are forced to spent a lot of time searching for funds (from traditional bank loans, state programs, venture funds and accelerators to crowdfunding) with zero result, this requires research and special funding pattern creation.

Setting objectives of the paper. Paper objective is to develop and substantiate conceptual model of industrial facilities funding with venture capital.

Presenting major data subject to study with complete grounding of scientific research findings. Venture investment environment subjects, both domestic and foreign, have powerful financial (not merely financial) capabilities, yet deliver them into the fields ensuring the biggest and fastest payoff (information and communication

technologies, agrarian business, food technologies), and play it safe avoiding investments to the industry.

Yabchenko Z.B. [8] stated that that venture investment is specific variety of financial investments into high-tech production, money making opportunity in which borders on high risk. Due to this fact, the effective activity of venture funds being critically important for financial support of innovative and investment projects in Ukraine is impossible without state participation.

Venture capital use practice chops and changes, however specific intellectual, information and institutional-legal environment creation for innovative projects implementation within venture capital funding framework is indisputable [7, p.9].

To support this idea, the following functions of venture capital detailed by Matey V.V. can be provided: innovative, business initiative stimulating, hi-tech industrial facilities establishment facilitating, economic growth support, filling the gap in small and mid-size business funding [6, p.4].

Situation when against the background of protracted economic recession, political instability and unfavorable conditions for business activities intense interest of foreign capital to Ukrainian projects is observed is explained by their ingenuity and commercial attractiveness.

Koretska-Garmash V.O. [5, p. 8] noted such features attributable to venture capital funding into machine building facilities only:

- long term of funds investment;
- old-fashioned technical facilities;
- diverse technical support due to the variety of production processes used;
- high level of manufacturing facilities cooperation in the industry branch being the result of specialization profiles formed in the soviet economy period;
- the majority of machine building companies are not state-owned;
- low competitiveness level between machine building companies;
- slow moving market of product where long-term relationships between consumers and supplies have been created;
- threat to Ukrainian machine building industrial facilities operation from foreign

machine building facilities;

- possibility to provide maintenance by domestic machine building facilities;
- production means manufacture for the other branches of the national economy

featured with long lifetime.

Generally venture activity funding issues are connected with:

- inaccessibility of overwhelming majority of available sources of funding;
- financial restrictions which are the most common trouble for small and mid-size

industrial facilities (even payment delay is a threat).

These problems can be partially solved with comprehensive approach and funds rising from various sources, e.g. grant getting or rational approach to available resources.

Let us analyze the specific features of venture activity investment environment subjects to find out possibility of their engagement by industrial facilities. We shall take SWOT-analysis method as the basis for our analysis. SWOT-analysis provides for factor analysis of strong and weak points as well as well as capabilities and threats to the facility subject to consideration. Taking into account big number of factors and their nonlinear effect, let us identify three most valuable factors in each category. Venture activity investment environment subjects SWOT-analysis fragment is given in the Table 1.

Based on the results of analysis performed, we can note that each of the possible investors of venture activity has its advantages and disadvantages which shall be considered to use them in the most efficient way.

Basic feature of venture activity distinguishing it from traditional innovative or investment activities is specific pattern of funding. It involves unique interrelations which do not occur in uncontrolled manner, but clearly defined and regulated.

As a rule dynamic and growth companies are subject to investment. They demonstrate high potential and require additional funds to introduce technological innovations which in their turn will allow to raise company rating at the market [9].

Table 1

SWOT-analysis of venture activity investment environment subjects (fragment)

Subjects	Strong points	Weak points	Capabilities	Threats
1	2	3	4	5
Banks	<ul style="list-style-type: none"> • absence of necessity to incorporate bankers to shareholders; • financial liabilities to the bank only (apart from other investors); • preciseness of payments 	<ul style="list-style-type: none"> • bank loans market volatility; • high interest rates; • the necessity to substantiate project efficiency to the bank 	<ul style="list-style-type: none"> • possibility to raise any amount of funds; • possibility of funding with any currency; • possibility to get funds fast 	<ul style="list-style-type: none"> • high risk of loan non-delivery; • high risk for industrial facility to fail with loan and interest repayment on account of project implementation; • loans unavailability for this type (innovative) activity
State	<ul style="list-style-type: none"> • state guarantee; • binding character of funding; • state support 	<ul style="list-style-type: none"> • inadequate legislative framework; • significant complexity of fund raising; • not all the stages of the project can be funded 	<ul style="list-style-type: none"> • participation in state target-oriented programs; • possibility to participate in programs under President's patronage; • possibility to get grant 	<ul style="list-style-type: none"> • absence of state programs in this sphere; • extended terms of the project coordination; • failure to meet funding schedule
Business-incubators	<ul style="list-style-type: none"> • one of the most effective types of support for any business activity around the world; • reduces number of failures in business (to 20%); • provides for venture manufacturing good standing from 12 months to 3 years 	<ul style="list-style-type: none"> • in fact business-incubators deal with infrastructure operation and various benefits "arrangement"; • work place and office leasing out or subleasing, supporting appropriate technical condition of such place; • do not render major service – competitive companies – market leaders incubation 	<ul style="list-style-type: none"> • consulting, administrative, managerial and other services provision to facilitate starting company development; • training (according to management, marketing, financial activity and business planning programs); • probation at the leading centers all over the world 	<ul style="list-style-type: none"> • fixed fee for participation in the project; • state and municipal entities, along with big Institution of Higher Education are the "donors"; • limited character of financial support
Business-accelerators	<ul style="list-style-type: none"> • expert support provision; • funding; • clearly defined temporary program of growth meeting which is supervised by mentor 	<ul style="list-style-type: none"> • focused specialization (majorly, Internet-projects); • supports at initial stages only; • provides fast and targeted aid only 	<ul style="list-style-type: none"> • big companies act as "donors"; • market value of innovation is of high importance; • trying project at the market 	<ul style="list-style-type: none"> • portion in the project is taken for support; • restricted cooperation term (3 months); • not idea, but the project is the subject of support

Table 1 (continued)

1	2	3	4	5
Business angels	<ul style="list-style-type: none"> • support at early stages when the other investors decline; • support of projects based on new technologies; • continued involvement in project affairs 	<ul style="list-style-type: none"> • average amount of investments equals 70-150 thousand USD only; • investment within own geographic region; • support based on business angel experience only 	<ul style="list-style-type: none"> • capability to engage any resources (financial, etc.); • single project can have several business angels; • special events 	<ul style="list-style-type: none"> • high risk of cash loss (complete failure is 34%); • support of small business only; • privately held positions
Venture funds	<ul style="list-style-type: none"> • are official partners of international industrial facilities; • simplified process of cash flow management facilitates effectiveness; • total control over fund's operating activities 	<ul style="list-style-type: none"> • priority for the companies which do not have their shares at stock market, having them distributed among share holders; • fund assets can be completely composed of immovable, corporate rights and securities; • loans can be given only to legal persons in which such fund has share 	<ul style="list-style-type: none"> • operative lending of own projects on the account of fund assets; • raising funds of the other investors for common projects; • anonymity protection 	<ul style="list-style-type: none"> • fund assets can contain debenture stock (promissory notes, instruments of pledge, loan agreements, etc.); • share of total assets неограничен which can be invested into specific securities is unlimited; • unrestricted number of fund participants
Crowdfunding and fundraising	<ul style="list-style-type: none"> • form of area funding, with no middlemen involved; • specific venture projects funding; • allows startup companies to raise significant funds 	<ul style="list-style-type: none"> • inadequate legislative framework; • significant complexity of funds raising; • funding at specific project stages; 	<ul style="list-style-type: none"> • Internet capabilities attraction; • “donors” is collective cooperation of people who invest their money on voluntary basis; • possibility of funding without papers submission 	<ul style="list-style-type: none"> • risk of cash non-return to investors; • incomprehension of innovation significance by ordinary people; • impossibility to implement high-tech projects in field-specific sphere
Centers	<ul style="list-style-type: none"> • specially arranged to place new industrial facilities; • power supply, engineering utilities, administrative-legal conditions provision; • professional management of specialized company 	<ul style="list-style-type: none"> • it is not specifically directed on specific sphere of innovative activities of certain manufacturing facility; • do not search for high technologies; • limited possibilities of startup industrial facilities' financial support 	<ul style="list-style-type: none"> • possibility to commercialize the results; • infrastructure provision; • scientific-technical and financial facilities to perform research and development 	<ul style="list-style-type: none"> • support of small business only; • the necessity to pay for services rendered by the center ; • impossibility to implement high-tech projects in field-specific sphere

Any system is affected by factors (making both inside and outside impact). Venture activity is not an exception. Traditionally scientists divide impact factors into the groups: objective /judgmental, direct/indirect, controlled/uncontrolled, etc. To our opinion this division shall be added with the following groups: variable/permanent (within an established period of time). Such classification criterion will allow businessmen to account for changes taking place in the environment and have an impact on specific innovative project implementation with no need to repeat the whole analysis procedure of macro-environment effect on the project.

In case venture activity is contemplated from innovating company positions, major risk factors faced by such company are as follows (Fig. 1):

- innovative-investment project itself,
- all variable factors of macro-environment (due to their permanent uncertainty),
- terms of agreement with investor (due to impossibility to completely insure it).

International practice does not have an experience of complete venture insurance in classical meaning of this term. The following insurance types are used to mitigate the risks [9]: property risk insurance (in particular of innovative companies being venture capital funding objects), top managers' life insurance, liability insurance and other classic types of insurance.

Global experience shows that insurance is mandatory to obtain funding for industrial facility.

In case venture activity is contemplated from investor positions, major risk factors faced by him/it are as follows: innovative-investment project selection, innovative industrial facility selection to implement such a project (first of all management of the industrial facility furnishing project implementation guarantees), terms of agreement with industrial facility.

Investor withdrawal from the project is possible at various stages: IPO (from English *Initial Public Offering*) – initial public sale of private company shares; Internal redemption of stock; take-over; sale to strategic investor; winding-up.

Project selection by the company and investor is affected by a number of parameters which need to coincide: amount of venture capital connected with project cost; company micro environment factors and its resources determine technical capabilities to implement the project; investor micro environment factors are restricting when project is evaluated by profitability indicators, payback period, riskiness, etc.; market situation factors (prognostic demand level, market places and channels, availability of substitute/me-too commodities, etc.).

Various subjects can act as venture investors. Sources of venture capital (in compliance with the list [10]) can comprise as follows: free financial resources of pension foundations, charity funds; government institutions; corporate venture capital; private investors; small business investment companies; foreign investors; banks; insurance companies; profit of venture funds reinvested to innovative projects.

Considering the specific features of business in Ukraine and all aspects of venture, it is fair to say that in general venture funding model is not fundamentally different from the models recognized all over the world, however it has its own unique features (connected with low level of the local manufacturing facilities development, overregulation of business activities, high level of taxation, high level of risks, etc.). Conceptual model of Ukrainian industrial facilities funding with venture capital in graphic form is given in the Fig. 2.

Findings of the present research and future developments in the field. Summing up the results of performed research, let us state as follows:

- SWOT-analysis carried out for industrial facilities being subjects of venture activity investment environment allowed to distinguish benefits and burdens of each of them, which can be used when targeting investors at various stages of venture project implementation;
- it was proposed to add the division of venture activity impact factors with the following groups: variable/permanent (for specified time period), which will allow businessmen to account for changes taking place in external environment and affect specific innovative project implementation, without the necessity to repeat complete procedure of macro environmental impact to the project analysis;

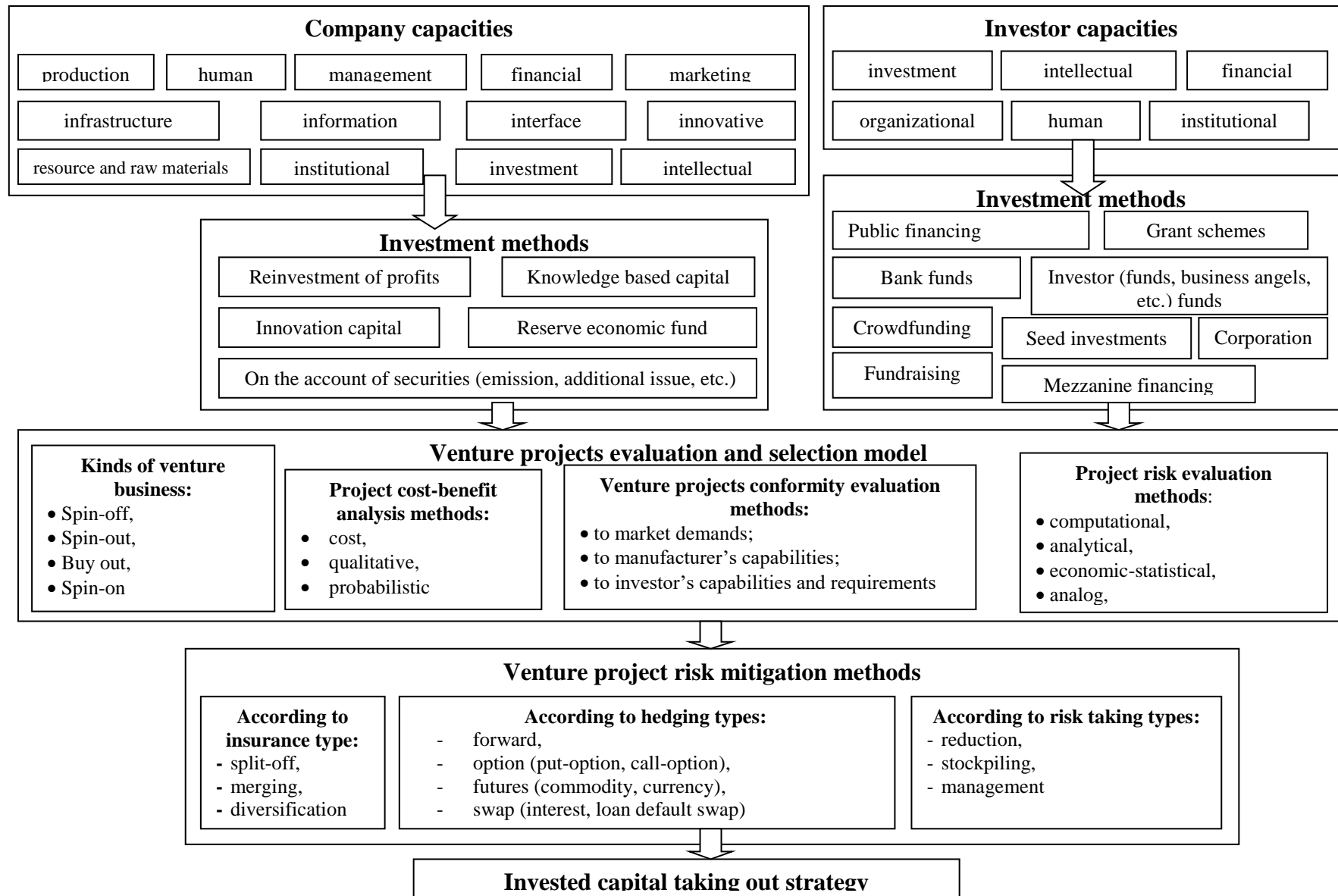


Fig. 2 Conceptual model of Ukrainian industrial facilities' funding with venture capital

- investor to venture company interrelation pattern has been analyzed allowing to identify basic features of conceptual model of industrial facilities funding with venture capital;
- proposed conceptual model of industrial facilities funding with venture capital takes into consideration domestic specifics of the process.

The results of this research can be used in the practical activities of domestic manufacturing facilities dealing with ventures, as well as taken as a basis for further research and development activities in particular in view of industrial facilities' venture activity procedure development.

1. Єршова Г.В. Взаємозв'язок джерел фінансового забезпечення інвестиційної діяльності промислових підприємств: автореф. дис. ... канд. екон. наук: 08.00.08 / Г.В. Єршова ; Ін-т економіки та прогнозування НАН України. – К., 2010. – 19 с.
2. Попов С.Ф. Організаційно-економічний механізм комерціалізації і трансферу наукоємних технологій малими підприємствами: автореф. дис... канд. екон. наук: 08.00.03 / С.Ф. Попов ; НАН України. Ін-т економіки пром-сті. – Донецьк, 2008. – 20 с.
3. Шило Л.А. Удосконалення венчурного інвестування металургійних підприємств: автореф. дис... канд. екон. наук: 08.00.04 / Л.А. Шило ; Приазов. держ. техн. ун-т. – Маріуполь, 2008. – 20 с.
4. Васильєва Т.А. Діяльність банківських установ на ринку інноваційного інвестування: методологічні засади: автореф. дис... д-ра екон. наук: 08.00.08 / Т.А. Васильєва ; Держ. вищ. навч. закл. "Укр. акад. банків. справи Нац. банку України". – Суми, 2008. – 38 с.
5. Корецька-Гармаш В.О. Венчурне інвестування на машинобудівних підприємствах : автореф. дис... канд. екон. наук: 08.00.04 / В.О. Корецька-Гармаш; Східноукр. нац. ун-т ім. В.Даля. – Луганськ, 2009. – 21 с.
6. Матей В. В. Економічні умови формування та розвитку ринків венчурного капіталу у світовій економіці: автореф. дис. ... канд. екон. наук : 08.00.02 / В. В. Матей ; Київ. нац. ун-т ім. Т. Шевченка. – К., 2010. – 20 с.
7. Тарадайко Д.О. Венчурне інвестування інноваційної діяльності : Автореф. канд. екон. наук. 08.00.03 / Д.О. Тарадайко ; Донец. нац. ун-т економіки і торгівлі ім. М.Туган-Барановського. – Донецьк, 2007. – 19 с.
8. Янченко З.Б. Сучасні особливості та перспективи розвитку венчурного фінансування в Україні / З. Б. Янченко // Ефективна економіка. – 2010. – № 10. – Режим доступу до матеріалу : <http://www.economy.nauka.com.ua/?op=1&z=361>
9. Венчур: бизнес, капитал, инвестиции / Официальный сайт компании "All the world" (Весь Мир) [Электронный ресурс] – Режим доступа к материалу :

<http://wesmir-inc.net/stati/ekonomika/143-venchurnyj-biznes-venchurnyj-kapital-venchurnye-investitsii>

10. Краснокутська Н. В. Інноваційний менеджмент: Навч. посібник. / Н. В. Краснокутська – К.: КНЕУ, 2003. – 504 с.

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КОНЦЕПТУАЛЬНА МОДЕЛЬ ВЕНЧУРНОГО ФІНАНСУВАННЯ ПРОМИСЛОВИХ ПІДПРИЄМСТВ УКРАЇНИ

Анотація

Проведений SWOT-аналіз суб'єктів інвестиційного середовища венчурної діяльності промислових підприємств дозволив виокремити переваги і недоліки кожного з них, що може бути використане при виборі інвесторів на різних етапах впровадження венчурного проекту. Проаналізована схема взаємозв'язків між інвестором і венчурним підприємством дозволила визначити основні особливості концептуальної моделі венчурного фінансування промислових підприємств. Запропонована концептуальна модель венчурного фінансування промислових підприємств, що враховує вітчизняні особливості цього процесу.

Ключові слова: венчурна діяльність, промислові підприємства, інвестиції, венчурне фінансування, SWOT-аналіз, модель.

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КОНЦЕПТУАЛЬНАЯ МОДЕЛЬ ВЕНЧУРНОГО ФИНАНСИРОВАНИЯ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ УКРАИНЫ

Резюме

Проведенный SWOT-анализ субъектов инвестиционной среды венчурной деятельности промышленных предприятий позволил выделить преимущества и недостатки каждого из них, что может быть использовано при выборе инвесторов на различных этапах внедрения венчурного проекта. Проанализированная схема взаимосвязей между инвестором и венчурным предприятием позволила определить основные особенности концептуальной модели венчурного финансирования промышленных предприятий. Предложенная концептуальная модель венчурного финансирования промышленных предприятий, которая учитывает отечественные особенности этого процесса.

Ключевые слова: венчурная деятельность, промышленные предприятия, инвестиции, венчурное финансирование, SWOT-анализ, модель.

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