

VENTURE CAPITAL STRATEGIES FOR INNOVATION LEADERSHIP TNK OF THE WORLD'S



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Abstract. In the era of internationalization and globalization of economic processes, venture structures – venture funds, venture management companies and venture enterprises implementing investment projects with a high risk-high return ratio – play a special role in the development of national economies. At the present stage, the venture capital industry is the most effective mechanism for financing innovations and one of the ways to create highly profitable industries.

Keywords: *innovation, investment, venture funds, venture companies, transnationalization, world market, capital.*

Introduction

By changing their business models and introducing innovative technologies, TNC can increase their competitiveness in the international market. This is especially important in the context of integration, when the modern world is facing numerous global challenges, such as climate change, energy problems, health crises, and others. TNCs, with their global network of subsidiaries and partners, can play a key role in addressing these challenges through innovation and the introduction of new technologies.

Literature review. A wide range of theoretical and methodological issues of TNC strategies in investment activities, the functioning of venture capital mechanisms have been studied in the works of such scientists and specialists as M. Porter (2003), W. Buffett (2021), J. Soros (2008), L. V. Rudenko (2004), A. I. Shevtsov, G. I. Mernikov (2004), I. A. Lomachynska, L. I. Ajadzh (2016), L. Mykhailyshyn & V. Svirskyy, (2017).

Research methodology. The methodological basis of the work is a systematic approach to the analysis of processes and phenomena in the global financial market, the study of scientific works of domestic and foreign scholars on the theory and practice of venture capital activities of TNCs. To accomplish the tasks set, the author used general scientific methods of cognition: historicism – to identify patterns of development of venture strategies in the context of financial market globalization with the participation of TNCs in these processes; analogy and comparative analysis – to assess the investment activity of participants in different segments of the world financial market; methods of economic analysis, processing of statistical materials – to develop measures to intensify investment activity in the financial market of Ukraine; analysis and synthesis – to identify the peculiarities of TNCs' investment activities in the financial market of Ukraine (in the formulation of conclusions and recommendations).

Based on the positive international experience of TNCs' innovation activities, the article outlines the positive aspects of introducing venture capitalist technological infrastructure and artificial intelligence (VCI) in Ukraine during the war, which may have several important advantages and contribute to improving the situation in the country.

Research results. The high dynamics of changes in the external environment in the activities of transnational corporations, which is due to the formation of new conditions for economic management and cooperation, necessitates an analysis of the factors that influence the strengthening of TNCs' positions in the intensive processes of innovation and commercialization of innovations.

The general prerequisites for the emergence of international venture capital investment are global processes taking place in the world economy: trade liberalization, transnationalization of production, intellectualization of the economy, formation of a single information space, internationalization of standards, formation of the global financial system, and formation of an international financial infrastructure.

The following circumstances were specific to the venture capital sphere: the absence or insufficient number of objects and industries attractive for venture capital investment within the national economy, the absence or

insufficient amount of venture capital investment funds and their sources, and the absence or low professionalism of venture capital managers. An important prerequisite was also the existence of international outsourcing models, in which Indian, Chinese, and other Diasporas in the United States and other developed countries sent orders for high-tech projects to their homeland (Hamilton, 2011). The participation of TNCs in the process of international venture capital investment is strategic – venture capital funds are a "component of the global investment portfolio that stimulates the development of information and communication technologies by financing innovative developments" (Global 500 FORTUNE, 2022).

An analysis of the industry structure of the top 100 TNCs shows that the most attractive investment sectors are electronics and communications (18 out of 100 firms), automotive (11 firms), oil refining (11 firms), and chemicals (13 firms). The importance of electronic, electrical, and computer companies is growing. At the same time, the traditional "fiefdoms" of TNCs – oil refining and automotive – also retain their importance (United Nations Conference on Trade and Development (UNCTAD), World Investment Report, 2020).

In the context of globalization, TNCs pursue global strategies based on innovations and the implementation of the latest methods of competition. TNCs in global markets are involved in innovative rivalry between leading companies with high technologies. Global innovative hypercompetition is a general process of innovative rivalry between leading TNCs – leaders from the most developed countries in global markets. In times of crisis, when the value of a company decreases significantly, small, and medium-sized enterprises become a target for large international companies. Buying progressive enterprises, especially at a reduced cost, is one of the ways for TNCs to innovate.

TNCs are forming new types of strategic alliances to minimize research costs. Most often, they are formed at the stage preceding the commercialization of innovations to make more efficient use of the knowledge possessed by all members of the alliance. Strategic alliances as a form of scientific and technical cooperation between industrial companies from different countries are characterized by the following properties:

- obtaining new scientific and technological knowledge within the chosen field of activity or exchanging technologies available to the partners.
- distribution of benefits from cooperation among the participants and exercise of the right to control its implementation.
- maintaining autonomy and independence, creating an alliance with a partner only in the area where support is needed.

According to UNCTAD, we can observe that most TNCs are in East Asia – 208 companies, which account for 42% of the global share, North America occupies 28%, and Europe, in turn, 26% of the total market. As of 2022, only 5% of companies are located outside of East Asia, Europe, and America. China 33% United States 28% Japan 11% Germany 6% France 6% United Kingdom 4% South Korea 4% Switzerland 3% Canada 3% Netherlands 2% China United States Japan Germany France United Kingdom South Korea Switzerland Canada Netherlands 41 There are approximately 80 thousand companies in the world. The latest UNCTAD data on state-owned TNCs emphasize their growing role in the global economy. Approximately 1,500 state-owned TNCs have more than 86,000 subsidiaries around the world, accounting for about 10% of all multinational corporations' subsidiaries. Their investments in 2020 amounted to 11% of global investment. China is the main country of residence for this type of TNC (14. World Investment Report, 2018; Voitko, Grynko 2008).

More than a quarter of them are related to the joint implementation of projects in microelectronics and computing, industrial automation, technology, and telecommunications. They are actively used in biotechnology and the creation of new materials. For example, the purpose of the strategic alliance between Hitachi (Japan) and Texas Instruments (USA) was to expand their experience in developing RAM. The benefits for both companies are to gain the knowledge necessary to develop new products. Another example is the alliance of Hitachi (Japan) with Motorola (USA), created to reduce costs UNCTAD and reduce risks. Several alliances have been formed in the electronics industry to develop a fast processor: "Toshiba (Japan) and IBM (USA), Fujitsu (Japan) – AMD (USA), Sharp (Japan) – Intel (USA), which aim to gain strategic knowledge to strengthen core competencies and review the directions of innovation policy in the future.

TNCs often organize research centers and venture capital enterprises independent of the parent corporation to make the most efficient use of innovations, even those that are not yet in demand by the parent TNC or are not core business (e.g., Lucent Technologies and Xerox Technology Ventures). The functioning of venture capital companies is driven by the development of strategically important aspects of research and development activities and the need to support innovative projects of certain groups of specialists and sometimes individual innovators.

TNCs may have several separate venture capital firms. For example, General Electric (USA) has 30 such companies with a total fund of more than \$100 million.

The choice to create a separate venture capital company is not accidental. The high efficiency of UNCTAD and innovation processes in small firms is generally due to a set of factors, including:

- Adoption by the states of legislative acts to provide tax and other benefits to small businesses.
- State support for financing risky business.
- Maximum intensity of research and development in small companies, where all efforts are concentrated on one project for a short period.
- Small management apparatus, which allows to reduce overhead costs, avoid bureaucratic contracts, and permits, which ultimately reduce the efficiency of UNCTAD in laboratories of industrial corporations.
- More flexible production, which is typical for small firms, where it is possible to track the trend of market development.
- Twice the efficiency of the results of innovation activities of small enterprises and a quick return on investment.

Entering the global market of innovations, TNCs integrate innovation activities within the entire structure of the parent corporation, with TNC branches specializing in those innovations where they are most competitive, and the process of internationalization of innovation activities is underway.

A characteristic feature of the organization of innovation activities at the venture capital enterprises established by large TNCs is their location in the country of origin. An exception in this case is the United States, where conditions for innovative entrepreneurship are so favorable that many foreign companies relocate their research centers to this country.

Almost all companies located in the United States and involved in such areas as healthcare, information technology, consumer services, business, and financial services. The investments of these companies belong to the corporate capital of Microsoft (USA), HP (USA), Vodafone (UK), AT&T (USA), Samsung (South Korea). The collapse of the Silicon Valley Bank, which worked mainly with startups and technology businesses, made founders and venture capitalists nervous not only in the United States but also in Europe. According to some reports, fund portfolios may decrease by 25-30%, which is about \$500 billion. The world is gradually moving towards a global recession, so 2023 for startups is not about growth, but about survival (Voitko, Grynko 2008).

Globally, 5 major sectors of the economy dominate in terms of the number of UNCTAD investments. The structure and percentages are very similar to the distribution of the 100 largest non-financial corporations by industry. As we can see in Chart 3, the pharmaceuticals and biotechnology sector remain the largest in the world, ahead of the technology equipment and automotive sectors, but the difference between these sectors is not large. The three largest sectors have almost equal shares of total UNCTAD investment among the world's 1000 largest companies, but only the pharmaceutical and biotechnology sectors increased their investment in 2020-2022. Together, the 5 largest sectors account for more than 66% of the investments of the world's 1000 largest companies. This figure is slightly lower than in previous years (68%) (Financial Times, 2022).

Among the factors shaping the leading positions of TNCs in the global creation and development of innovations, we should also highlight the increase in research and development costs. This is especially evident in the pharmaceutical industry. The pharmaceutical and biotechnology sectors show the best results in the global league table.

Over the past 10 years, pharmaceutical corporations have seen their revenues grow several times. At the same time, the amount of money spent on research and development is growing. Since 1980, UNCTAD expenditures of US corporations have been doubling every 5 years. One dollar invested in research and development brings a return of five dollars. Such a high return has not been recorded in any other industry.

Along with intensive innovation and rapid capital accumulation, mergers and acquisitions play an important role in the development of many pharmaceutical corporations.

One of the trends in the development of TNCs is the further internationalization of their activities. Investors have recently been particularly interested in Generative AI, artificial intelligence that converts text commands into images, videos, or coherent text. While in 2018, investments in AI products amounted to \$408 million, in 2022 this figure reached \$4.5 billion. Therefore, founders should consider integrating AI into their products either as an innovative development or as a tool that optimizes team processes (World trends in R&D private investment, 2022).

Here are some of the reasons why Generative AI has really attracted significant interest among investors recently:

- Generative AI can create impressive and innovative media content such as art, music, graphics, animation, and many other types of creativity.
- This technology allows you to create personalized images, videos, and text for individual users, which can be useful for marketing and advertising.
- Generative AI can be applied to solve specific tasks, such as generating medical images for diagnostics or creating scenarios for video games.
- Media content generation with the help of artificial intelligence can improve the automation of workflows in various business areas.
- Generative AI can be used to create interactive games, virtual reality, and other entertainment applications.

Investing in Generative AI can lead to the creation of innovative products and services, as well as open up new markets and opportunities in various industries. However, it is important to understand the potential ethical, legal, and social challenges that may arise from the use of this technology and to comply with relevant rules and regulations. Of course, investing in AI also involves risks, and the success of an investment depends on many factors, including the technical potential of the project, the competitive environment, and the capabilities of the team. It is important to conduct a thorough analysis and consider all aspects before deciding to invest in this sector.

Conclusions

The development of technological infrastructure and artificial intelligence (TNK) in Ukraine during the war could have several important benefits and contribute to improving the situation in the country:

- Infrastructure preservation. The development of TNCs can help preserve critical infrastructure facilities, monitor the condition of roads, bridges, power lines, etc. to ensure the safety of citizens and recovery from war;
- Humanitarian aid. TNCs can be used to better coordinate and deliver humanitarian aid, as well as identify the most needed resources and locations for their delivery;
- Education and science. The development of TNCs in education can improve access to quality education, create new opportunities for distance learning and research, and raise the level of scientific research in Ukraine;
- Monitoring and reconnaissance: Through the use of drones and satellite imagery, TNCs can contribute to more effective monitoring and intelligence on the front lines, which can help military and civilian authorities obtain important information;
- TNC development in cybersecurity can help protect critical information infrastructures and data from cyberattacks;
- Resource efficiency. The use of TNCs can help optimize the allocation of resources, which is especially important in times of war when resources may be limited;
- Interconnection with the world. The development of TNCs can improve Ukraine's communication and connection with the international community, which can help to obtain support and assistance;
- Psychological support. Virtual reality technologies and other TNCs can be used to provide psychological support to military and civilians affected by war.

Of course, the development of TNCs requires investment and coordination of efforts, as well as addressing cybersecurity and ethical issues in the use of such technologies. However, they can contribute to improving the situation in times of war and ensure greater security and efficiency for the government and citizens of Ukraine. Overall, the development of TNCs is a key factor in creating a future Ukraine that will be competitive on the global stage.

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