MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
KYIV NATIONAL ECONOMIC UNIVERSITY
NAMED AFTER VADYM HETMAN

Faculty of International Economics and Management
Department of International Economics

BACHELOR'S DEGREE PROGRAM	**«INTERNATIONAL ECONOMICS»**
FIELD OF KNOWLEDGE	**05 Social and behavioral sciences**
SPECIALTY	**051 «Economics»**

Form of education: full time

BACHELOR THESIS

INTERNATIONAL BUSINESS INVESTMENT ACTIVITIES IN HIGH-TECH SECTORS OF THE USA ECONOMY

By Manzar Mammadova Dzheikhun KYZY

Academic Supervisor Ph.D, Associate Professor

N. Moskalyuk

Bachelor Thesis has been approved for defense at Attestation Examination Commission (EC)

Head of the Department of International Economics
Dr.of science, Professor Y.Stoliarchuk

KYIV 2023

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AGREED

Head of the project group (guarantor) of the educational-professional program "International Economics"

_____Y. Stoliarchuk

(Signature)

_____ 2023

APPROVED

Head of the Department of International Economics

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(Signature)

_____ 2023

INDIVIDUAL TASK

higher education applicant Mammadova Manzar

form of education *full-time*

Bachelor Thesis

Title: International Business Investment Activities in High-tech sectors of the USA Economy

The title of the bachelor's thesis has been approved by the Rector's Order «07» 12. 2022 №535

Bachelor Thesis is based on the analysis of theoretical and practical aspects of international business investment activities of high-tech sectors of USA Economy and the determination of the prospects of attracting US foreign investment to the high-tech sector of the Ukrainian economy.

Deadline for submitting the final version of bachelor's Thesis to the Academic Supervisor *(20.05)*

Plan of Bachelor Thesis and the terms of its submission to the Academic Supervisor

Chapter 1 Theoretical Foundations of the International Business Investment Activities

Chapter 2 Analysis of International Business Investment Activities of high -tech sectors of the USA Economy

Object of research:	**The object of research** is investment activity of the international business of the US economy.
Subject of research:	**The subject of research** is the theoretical, methodological and practical mechanisms of investment activity of international business in the high-tech sectors of the economy of the USA and Ukraine.
The purpose of the Thesis:	**The purpose of the research** is to assess the investment activity of international business in the high-tech sectors of the US economy and to determine the prospects of attracting US foreign investment to the high-tech sector of the Ukrainian economy.

Specific tasks applicant has to accomplish to meet the objective:

In chapter 1: Covers the nature of international business investment activities, the classification of international investments, and the role of foreign investments in the high-tech sector and their influence on the growth of international business. Highlights some of the main ways of investing into foreign markets (Foreign direct investment, joint ventures, strategic alliances, and exporting). Includes the benefits and challenges fostered by international investments. The chapter also discusses the role of foreign direct investments (FDI) in the high-tech sector and their impact on the international business activities in the country.

In chapter 2: Provides a comprehensive overview of the investment landscape in the US high-tech sector, including an analysis of investment by international businesses in high-tech sectors, modern trends in the development of the US high-tech market, and the risks and opportunities associated with foreign investment in the high-tech sector of the US economy. Provides insight for the successful implementation of state science and technology policy to be considered and used in the formation of Ukraine's own strategy for obtaining competitive advantages in the field of R&D and commercialization of innovations.

The task has been set
by the Academic Supervisor _____ _____

(Signature) *(Name, Surname)*

"09" 01. 2023

The task has been given to

Applicant Manzar Mammadova

"09" 01. 2023

ABSTRACT

Bachelor's thesis contains 51 pages, 7 tables, 13 graphs, a list of references with 33 sources cited.

International Business Investment Activities in High-tech sectors of the USA Economy

The paper is devoted to assessing the investment activity of international business in the high-tech sectors of the US economy and determining the prospects of attracting US foreign investment to the high-tech sector of the Ukrainian economy. The essence of investment activities of international business is established. The classification of international investments. Is listed. The role of foreign investments in the high-tech sector and determination of their impact on the development of international business is described. Current trends in the development of the US high-tech market are determined. Risks of foreign investment in the high-tech sector of the US economy are analyzed.

According to the stated aim, the following tasks were identified:

- to determine of the essence of investment activities of international business;
- to classify of international investments;
- to describe of the role of foreign investments in the high-tech sector and determination of their impact on the development of international business;
- to analyse investment by international business in high-tech sectors of the US economy;
- to determine the current trends in the development of the US high-tech market;
- to systematize the risks of foreign investment in the high-tech sector of the US economy;
- to analyse the attraction of US foreign investments in the high-tech sector of Ukraine's economy and determine their prospects.

Year of bachelor’s thesis qualification: 2023
Year of defence: 2023

Key words: United States high-tech sector, cutting-edge technologies, investment landscape, tech industry jobs, sustainable economic growth and development, modern trends in high-tech industry, international business investment activities

Review

on the bachelor's thesis

of the student of the Faculty of International Economics and Management

of the bachelor's degree program "International Economics"

Mammadova Manzar

on the topic of **International Business Investment Activities of High-tech sectors of USA Economy**

1.Relevance of the topic: A characteristic feature of the modern socio-economic development of countries is their transition to an innovative new model of development. This, in turn, requires attracting investments that are invested in high-tech sectors of the economy. Therefore, the topic of research of investment activities of international business in high-tech sectors of the leading US economy is relevant.

2.Positive aspects of the bachelor's thesis: the quality of research is at a sufficient level. The author characterized the theoretical foundations of innovativeness of the economic development of countries, in particular, defined the essence of investment activity of international business, systematized the classification of international investments, defined the role of foreign investments in the high-tech sector and their influence on the development of international business.

3. Presence of author's independent developments: analysed of international business investment activities of high-tech sectors of the USA economy. The author identifies the current trends in the development of the US high-tech market and characterizes the risks of foreign investment in this high-tech sector.

4. Value of theoretical conclusions and practical recommendations: consists in the possibility of using the generalizing trends of investment by international business in the high-tech sectors of the US economy for the implementation of experience in the economy of Ukraine and the attraction of foreign investments of the US in the development of the high-tech sector of the economy of Ukraine.

5. Presence of drawbacks: outdated statistical data, for example, the dynamics of foreign investment in the US high-tech sector, ends with an analysis of only 2016. Some tables are not designed according to requirements. The risks of foreign investment in the high-tech sector of the US economy have not been generalized.

6. Overall assessment of the bachelor's thesis and its admission to defense: the research topic is fully disclosed, at a sufficient level, the work is written according to

the requirements, it is allowed to be defended before the Examination Committee with an assessment of **42 points.**

Supervisor:

PhD in Economics, Associate Professor

of the Department of International Economics of KNEU

Moskalyuk N.

_____

(signature)

“09” June 2023

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INTRODUCTION

The high-tech sector is an important component of the global economy, driving innovation, productivity, and growth across various industries. As technology continues to develop, the demand for advanced products and services is increasing, creating new opportunities for businesses, investors, and governments. The high-tech sector can at the same time be characterized by intense competition, rapid technological obsolescence, and significant capital requirements, making it a challenging sector for both businesses and investors.

International business investment activities have become an increasingly important aspect of the high-tech sector, as businesses seek to expand their reach, tap into new markets, and access cutting-edge technologies. Understanding the theoretical and practical aspects of international business investment activities is therefore essential for businesses, investors, and policymakers seeking to promote economic growth and development.

The object of research is investment activity of the international business of the US economy.

The subject of research is the theoretical, methodological and practical mechanisms of investment activity of international business in the high-tech sectors of the economy of the USA and Ukraine.

The tasks of the work are:

- determination of the essence of investment activities of international business;
- classification of international investments;
- description of the role of foreign investments in the high-tech sector and determination of their impact on the development of international business;
- analyse investment by international business in high-tech sectors of the US economy;

- to determine the current trends in the development of the US high-tech market;
- to systematize the risks of foreign investment in the high-tech sector of the US economy;
- analyse the attraction of US foreign investments in the high-tech sector of Ukraine's economy and determine their prospects.

The purpose of the research is to assess the investment activity of international business in the high-tech sectors of the US economy and to determine the prospects of attracting US foreign investment to the high-tech sector of the Ukrainian economy.

This paper focuses on the international business investment activities in the high-tech sector of the United States, which boasts one of the world's most advanced and dynamic economies. It is divided into two chapters, each addressing specific aspects of the topic. The first chapter provides a theoretical foundation for the concept of international business investment activities and its relevance in the high-tech sector. This chapter includes an analysis of the essence of international business investment activities, the classification of international investments, and the role of foreign investments in the high-tech sector and their impact on the development of international business.

The second chapter of the paper is focusing on analysing the international business investment activities of high-tech sectors in the US economy. This chapter provides a comprehensive overview of the investment landscape in the US, including an analysis of investment by international businesses in high-tech sectors, modern trends in the development of the US high-tech market, and the risks of foreign investment in the high-tech sector of the US economy. Additionally, this chapter explores the analysis and prospects of attracting US foreign investment to the high-tech sector of Ukraine's economy, taking into account the Covid aftermath and the current war in the country.

The paper draws on a range of primary and secondary sources, including academic research, industry reports, and government statistics. The analysis is

supported by a range of quantitative and qualitative data, including investment flows, market trends, and case studies.

Through this paper, we aim to provide valuable insights into the theoretical and practical aspects of international business investment activities in the high-tech sector of the United States. By examining the current investment landscape, trends, risks, and opportunities, we hope to contribute to a better understanding of the international business investment activities in the high-tech sector and promote informed decision-making among stakeholders. Ultimately, we believe that the insights and recommendations provided in this paper can help businesses, investors, and policymakers navigate the complex and dynamic landscape of the high-tech sector and drive sustainable economic growth and development.

CHAPTER 1.

THEORETICAL FOUNDATIONS OF THE INTERNATIONAL BUSINESS INVESTMENT ACTIVITIES

1.1 The essence of the international business investment activities

Since the turn of the century, international investments have grown in popularity. While these investments provide numerous options, they also boast their share of risks. Many investors in industrialized economies invest in emerging markets in search of bigger returns. Other investments are made through managed funds, exchange-traded funds, and other similar vehicles for diversification in expectations of moderate return. There are several legal entities all over the globe that monitor international transactions. International investments help foreign economies by driving international capital flows into a country; they also help to increase market confidence and business credibility.

Benjamin Graham, who is known as the “father of investing”, together with David Dodd have defined the term “value investing in his book called Security Analysis, in the following way: “value investing is deriving the intrinsic value of a common stock independent of its market price”. According to Benjamin Graham, "An investment operation is one which, upon thorough analysis, promises safety of principal and an adequate return. Operations not meeting these requirements are speculative."[1] John C. Hull, a Professor of Derivatives and Risk Management at the University of Toronto and the author of "Options, Futures, and Other Derivatives," defines investment as "the purchase of an asset with the expectation of earning a return on it over time."[2] Another definition of investment was studied by Burton Malkiel, an American economist, financial executive, and writer most noted for his classic finance book A Random Walk Down Wall Street. In his book he defines investment as "the purchase of securities with the expectation of earning a return in the form of dividends, interest, or capital gains."[3] In general, these definitions emphasize the act of contributing resources (money, effort, etc.) with the intention of gaining a return or

profit on that investment. They also highlight the significance of analysing and assessing investments to ensure they satisfy specific criteria, such as safety principle, acceptable returns, and income or profit potential.

The essence of international business investment activities is to expand business operations beyond a company's domestic market by investing in foreign countries. This comes in various forms, including foreign direct investment (FDI), joint ventures, strategic alliances, and exporting. Access to new markets, resources, and clients, as well as risk diversification, are a few advantages of investing abroad. It also creates difficulties, such as linguistic and cultural boundaries, political uncertainty, problems with laws and regulations, and variations in corporate practices.

Companies need to undertake in-depth market research, comprehend local rules and regulations, form partnerships with local partners, and create effective communication strategies in order to succeed in international commercial investment activities. It is also vital to have a strong awareness of global economic trends and political changes that may affect business operations. Therefore, businesses who are prepared to take on the challenges and exploit chances in the global marketplace can reap considerable gains from foreign business investment operations, but they do so at a great cost in terms of time, money, and resources.

International business investment activities are essential to economic growth since they can aid the investing company as well as the host country in a number of ways. Some of the benefits are listed below:

1. Job creation: International business investment activities can create jobs in the host nation, which can contribute to the reduction of unemployment and poverty rates. This in turn may result in local communities earning more money and enjoying a higher quality of life.
2. Information exchange: Activities involving international business investment can also help the host nation adopt new technologies, practices, and expertise, which can boost innovation, productivity, and efficiency.

3. Increased exports: Foreign business investment activities can contribute to the increase of export volumes from the host country, which could also yield foreign exchange earnings and benefit the balance of payments.
4. Infrastructure development: international capital flows can strengthen the host nation's infrastructure, by contributing to the construction of ports, roads, and other amenities essential for conducting business.
5. Knowledge transfer: International business investment activities can also facilitate the transfer of knowledge and expertise between countries, which can promote the development of institutional capacity and intellectual resource. [4]

Overall, international business investment operations can have a significant impact on the economic growth, job creation, and poverty reduction of host nations. They may also provide the investing firm with advantages including accessibility to new markets, resources, services, and clients as well as risk diversification and more opportunities.

International business investment activities can facilitate capital inflow into a country, which can have significant economic benefits. Whenever foreign businesses invest in a country, the capital typically takes the form of investments, loans, or other financial instruments. This influx of cash has the potential to support new initiatives, boost current operations which in turn greatly contribute to the economic growth and development of the country. One way through which the capital flows into a country is Foreign direct investment (FDI): The establishment of a new firm or the acquisition of an established company by a foreign corporation are both examples of FDI. Significant sums of money may be raised through this kind of investment, which can then be utilized to finance new initiatives and grow business operations. Another way is portfolio investment. The purchase of securities, like stocks and bonds, in another country is a component of portfolio investing. For businesses and governments in the host country, this kind of investment could serve as a great source of funding. Foreign banks or other financial institutions may also offer loans as part of international commercial investment activity. These loans may function as a means of financing for organizations and governments in the host nation. As much as international investment

activities can be crucial in encouraging capital inflow into a state, which can support economic development and progress, it's essential to ensure that these investments are handled appropriately and that the rewards are distributed equally among all parties involved.

There are a number of ways for governments to attract foreign investment into their economy. Here are some approaches that are believed to be very effective. Provide an attractive environment for investment: policymakers may foster an investor-friendly setting by lowering investment barriers including excessive regulations, high taxes, and excessive bureaucracy. To entice foreign investors, they might also provide incentives like tax exemptions, subsidies, and infrastructural support. Next is maintaining economic stability. Governments may establish effective macroeconomic policies, such as low inflation, stable exchange rates, and a robust banking system, to support economic stability. This will result in the encouragement of foreign investment and increase investor confidence. Countries can as well market their strengths and advantages to foreign investors through targeted marketing campaigns, investment conferences, and other promotional activities. This could help boost public knowledge of the potential returns and investment possibilities the country has to offer. Building partnerships is another effective method of facilitating international capital flows. To encourage investment and ease cross-border transactions, countries should form alliances with other governments, international organizations, and commercial organizations. This can foster confidence and lower the risks related to making investments overseas. Finally, invest in human capital. In order to contribute to the growth of a skilled labour force and the creation of an environment that appeals to international investors, it is essential for countries to invest in their human capital, by offering opportunities for high-quality education and training, as well as other resources and assistance to encourage entrepreneurship and business expansion. In general, attracting foreign business investment activities necessitates a systematic and coordinated strategy involving a broad range of stakeholders including governments, companies, and investors. These tactics may be used by countries or

policymakers to establish a favourable environment that encourages foreign investment and benefits economic development.

International business investment activity regulation is a significant part of monitoring foreign investments in a country. The regulatory structure should be intended to protect the host countries' and its residents' interests while simultaneously attracting international investment. Some key areas of the regulatory measures include investment screening, taxation, intellectual property protection and labour laws and environmental regulations and finally legal and regulatory framework. Governments can monitor the capital flows by screening investments to ensure that they are consistent with national security interests and other strategic priorities. This might include examining the investment's influence on the economy, the environment, and social welfare. Another way is to implement certain tax laws that while simultaneously attracting international investment require investors to pay their fair share of taxes. This might include granting tax deductions or lower tax rates to foreign investors, as well as ensuring that all investors have an equal chance of succeeding. Providing strong intellectual property rights such as patents, trademarks, and copyrights, can potentially entice overseas investors that want to safeguard their intellectual property. It is vital for a country to establish an explicit legal and regulatory framework that is transparent, foreseeable, and non-discriminatory to ensure that international investors are handled fairly and equitably under the law. Governments should also have labour and environmental laws in place that safeguard employees' and the environment's rights for long-term growth. In short, international business investment legislation should create a compromise between preserving the host country's interests and drawing in foreign capital. A clear and predictable regulatory framework is key to building trust and encouraging the development and expansion of the economy.

In conclusion, international investments have become increasingly popular in the last century, providing investors with numerous opportunities for potentially higher profits but also bearing risks. Foreign direct investment, joint ventures, strategic alliances, and exporting are some of the many ways of investing into foreign markets.

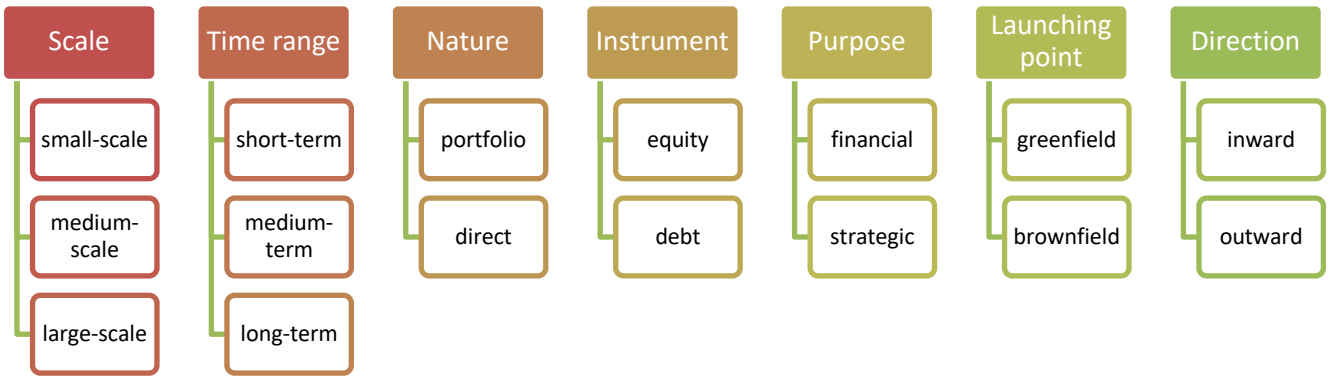
While international investments can foster benefits such as job creation, knowledge transfer, and infrastructure development, they also pose challenges like cultural differences, political instability, and disparities in corporate practices. To thrive in international commercial investment environment companies must undertake extensive market research and have a deep understanding of prevailing global economic trends. International capital flows greatly contribute to the economic growth of both the investing and host country, job creation, and alleviation of poverty as well as provide access to new markets, resources, services, and clients and so on. Governments may attract foreign investment by creating a favourable environment for investment, through tax incentives, cutting bureaucratic red tape etc. However, it is important to make sure that these investments are handled appropriately and that the profits are shared evenly by all parties involved. In general, if executed accordingly and with a clear awareness of the risks and obstacles involved, international investments can yield substantial economic profits.

1.2 Classification of the international investments

Foreign investments are divided into numerous groups depending on various criteria such as size, source, time range, nature, aim etc.

International investments can be categorised in a variety of ways based on their scale, but one typical approach is to split them into three categories: small, medium, and large scale. International investments on a small scale:

Table 1.1 - Classification of the Investments according to various criteria



Individuals or small enterprises make these investments, which often involve relatively small sums of cash. Individual investors purchasing stocks or bonds in overseas corporations and small enterprises exporting items to international markets are two examples of small-scale investments. Medium-scale international investments are ones undertaken by larger companies, that often involve higher sums of capital and more complicated terms and arrangements. Multinational firms establishing subsidiaries or joint ventures in overseas countries, or institutional investors acquiring large blocks of foreign currencies, assets or securities can be exams of investments of this scale. The third type, large-scale international investments are typically done by governments or multinational enterprises of a significant scale, involving considerable sums of capital as well as very sophisticated and complex political and economic aspects. Government-to-government loans or aid programs, or multinational

corporations acquiring entire foreign companies or investing in large-scale infrastructure projects can be listed as examples.

As well as by scale, investments can also be classified by maturity. Short-term foreign investments, medium-term international investments, and long-term international investments are the three well-known types. Short-term investments are made for a period of up to one year. Investments in money market funds, currency trading, or short-term bonds are a few examples. Medium-term international investments are made for a period between one and five years, usually involve real estate, investments in corporate bonds and private equity funds. Finally, long-term investments, which are often made for a period of more than five years. Examples include investments in stocks, government bonds, infrastructure projects, or foreign direct investment. The time range of international investments can have a substantial influence on the investment strategy, risk, and return expectations. Short-term investments typically have lower returns and lower risk, while long-term investments have higher returns but also involve higher risk.

Another common way to classify international investments is direct versus portfolio investment. This category mainly aims to distinguish the investments based on their nature. Foreign direct investment or FDI refers to a long-term investment by an investor n an enterprise in another economy resulting in lasting interest with significant influence over the overseas enterprise. FDI typically occurs through mergers and acquisitions or setting up of business operations by the investor in a foreign economy. The investor is referred to as the direct investor whilst the foreign business enterprise is referred to as the direct investment enterprise. For example, when a company based in Canada invests in an enterprise domiciled overseas the Canada-based company is the direct investor and the overseas firm is the direct investment enterprise. The transactions captured will be recorded in Canada's outward FDI. Conversely inward FDI is recorded when a foreign direct investor invests in Canada. [5]

FDI is measured by the sum of three components:

1. equity capital invested by the direct investor in the direct investment enterprise.
2. retained earnings accrued to the direct investor, which are earnings generated by the direct investment enterprise after deducting the dividends payable to the direct investor.
3. net inter-company loans between the direct investor and the direct investment enterprise

A portfolio investment on the other hand is a grouping of property which includes shares bonds and cash equivalents. Portfolio investments are held straight through investors or controlled via professionals in the economic field. In economics foreign portfolio funding is the access of budget into a country in which foreigners deposit cash in a country's financial institution or make purchases within the country's inventory and bond markets. Portfolio investments typically involve transactions of securities that are highly liquid, that is they can be bought and sold very quickly. Portfolio investments are usually made with the goal of earning a return on investment, rather than taking an active role in the management of the company. This is in comparison to direct investment which requires an investor to have some administrative influence over a company. These transactions, also known as portfolio flows, are reported in a country's financial account of a country's balance of payment. Portfolio flows are generated by the transition of ownership of shares from one country to another, according to the Institute of International Finance. High rates of return and risk avoidance by global diversification affect foreign portfolio investment positively. Interest income or non-voting distributions are typical returns on international portfolio investments. Direct investment and portfolio investment both have benefits as well as drawbacks. Since direct investing gives the investor more control and potentially larger profits, it involves a higher risk and demands more capital and expertise to operate. Portfolio investing can offer diversity and perhaps lower risk, but it also comes with less control and therefore lower profits. Capital flows (FDI and FPI) with equity-like characteristics are thought to be more sustainable and less vulnerable to reversals. Since it comes with more direct management supervision, FDI has more advantages

than other forms of financial flows. FDI is classified as an equity interest of 10% or more in a company, according to national and international accounting principles. FPI differs from FDI in that it does not involve a long-term investment or regulation. Debt flows, which include bank loans and bonds, are the third category of foreign investment and are thought to be more unstable.

International capital flows can also be categorized based on the direction of the investment: inward investment and outward investment. Inward investment refers to foreign investment into a country, where a foreign company or individual invests in businesses or assets located within the host country. International enterprises may establish new firms, acquire existing businesses, or invest in real estate or infrastructure in the host country. Outward investment, on the contrary, refers to domestic investment in other countries in which a corporation or individual from the home country invests in overseas enterprises or assets. [6] Domestic corporations extending their activities abroad, purchasing foreign enterprises, or investing in foreign property or infrastructure are examples of this. The primary distinction between inward and outward investment is the direction of the capital flow. Foreign capital and resources are brought into the host country through inward investment, which can boost economic growth and provide new potential job opportunities. Outward investment however allows domestic firms to broaden their operations and gain access to new markets, resources, and technology through expansion. Both inner and external investments can have upsides as well as downsides. Inward investment can offer new technology, skills, and job opportunities to the host country, but it can also result in profit transfers and resource outflows. Overseas investment can assist local firms diversify their activities and decrease risk, but it can also result in a cash and resource drain from the domestic country. Authorities must carefully assess the ramifications of inward and outward investments and establish policies that maximize profits while minimizing the risks.

The type of financial instrument utilized in international investments may also be segmented into equity and debt. Equity investing is purchasing ownership shares in

a firm, providing the investor a stake in the company. In exchange, the investor may earn dividends if the firm is prosperous, or capital appreciation if the business expands. Equity investments can be done by buying shares or by investing directly in an overseas firm. Debt investment, on the other hand, is providing money to a firm or government in exchange for interest payments and the repayment of the principal amount when the loan matures. Debt investments may be initiated by acquiring bonds or other debt securities authorized by overseas companies or governments. The nature of the investment is the primary distinction between equity and debt investing. Equity investment is purchasing a stake in a firm and profiting from its development, whereas debt investment entails loaning money to a company or government and earning interest payments in exchange. Equity investments are frequently regarded as riskier than debt investments since the investor's profits are contingent on the company's performance. Debt investments, however, are seen to be less hazardous since the investor is promised a fixed rate of return as well as the repayment of the principle amount at maturity.

Greenfield and brownfield investments is yet another way to classify the investment types. A greenfield investment involves a corporation establishing a brand-new plant from the ground up in a foreign land. This signifies that the investment is being undertaken in an entirely new, undeveloped location or area. This can include establishing a new production facility, setting up a new store, or constructing a new workspace. In contrast to the one mentioned above, brownfield investment refers to a corporation acquiring or leasing an existing plant or property in a different nation. This indicates that the investment is in an already developed region or place. Brownfield investments can implicate the restoration and modernization of existing facilities, such as replacing equipment or enhancing infrastructure.[7] The launching point of the project is the major difference between greenfield and brownfield investment. Among the advantages of greenfield investment, we can acknowledge that it gives a corporation entire control over the planning and building of a new plant, but it is also more time-consuming and more expensive to establish. Brownfield investment can

offer a firm with an existing infrastructure and client base, but it may require further investment to update and enhance the current facilities as well as more tolerance for accepting adoption of an already fixed system of operations. In terms of economic development, greenfield investment can help to create new jobs and stimulate economic growth in a region, while brownfield investment can help to revitalize existing infrastructure and create new opportunities for growth.

Furthermore, international investments can be differentiated depending on their purpose. A financial investment is primarily concerned with creating financial returns for the investor. This sort of investing entails purchasing stocks, bonds, mutual funds, or other financial products in order to gain maximal profit. The major focus is on assessing the investment's prospective yields and liabilities. A strategic investment, on the other hand, employs a more long-term approach to investing. It is not only about making money, but also about making a contribution and cultivating connections. A strategic investor may buy a share in an organization with the intention of partnering with the managerial team to help it prosper. The emphasis in this form of investment is on establishing synergies and enhancing the long-term value of the investment. In conclusion, while both strategic and financial investments require the deployment of assets to yield returns, strategic investments are primarily geared toward lasting partnerships and creating value, whereas financial investments are heavily focused on earning economic benefits.

To sum up, there exist numerous ways to categorize international investments, and the characterization may vary depending on the context that it is applied to. The chapter contains information regarding the classification on international investments based on their scale, maturity, purpose, utilised financial instrument, direction, nature and starting point. An investment's size, source, and time span can assist investors estimate their risk and return potential and create a diversified portfolio. The scale of investment is divided into three categories: small, medium, and large, with individual investors and small businesses making small-scale investments, multinational firms making medium-scale investments, and governments or multinational enterprises

investing significantly in large-scale investments. Differences in the investment maturity are equally significant in deciding investment strategy, risk, and gain. Short-term investments are associated with lower risk and lower returns, whereas long-term investments are associated with more risk and higher returns. For instance, foreign direct investment (FDI) is a long-term investment by an investor in a company into another economy, whereas portfolio investment often entails purchasing and selling assets with the purpose of receiving a return on investment. A better understanding of the types of international capital flows can aid in the identification of trends and patterns in investment behaviour, which can be beneficial to policymakers, investors, and enterprises.

1.3 The role of foreign investments in high-tech sector and their impact on the development of international business

This section will deal with the role of foreign direct investments in the high-tech sector and how they impact the development of international business in the country.

Foreign direct investment (FDI) may be highly important for the progress and development of the high-tech sector. Since foreign investors can use their worldwide networks and distribution channels to increase the reach of local high-tech enterprises, FDI can give access to new markets for high-tech goods and services. FDI may attract new funding to support R&D, product innovation, and the development of new technologies, that can benefit domestic high-tech firms in maintaining their competitiveness and accelerating their growth. International business investment activities can encourage the development of supply chains and clusters in the high-tech sector in addition to facilitating the transfer of knowledge and technology between overseas businesses, which can potentially enhance the technological capabilities of local firms and strengthen their capacity for innovation. Foreign investors may attract suppliers, service providers, and other interested parties to boost their operations. One of the obvious effects is also job creation. Foreign direct investment can lead to the creation of employment in the high-tech sector by allowing foreign companies to recruit local workers to support their business activities or by allowing domestic firms to hire more people to fulfil the demand created by foreign investors which will in turn lower the unemployment rates.

International investment may yield significant amount of capital, knowledge, skill, and technology to the high-tech industry, fostering innovation and growth. A foreign corporation, for instance, may invest in a domestic high-tech start-up, giving it money to expand its operations, create new products, and compete in global markets. Likewise, foreign investment may encourage cross-border collaborations, partnerships, and information exchange, which can boost the whole sector. Along with the positive effects of foreign capital inflows into the country there come negatives as well. On the

negative side, overseas investment might result in the loss of intellectual property and the exodus of people and resources from the domestic high-tech sector. International investors can acquire critical technology or patents and then move them to their native countries or other areas with cheaper labour costs, possibly undermining the domestic high-tech industry's competitiveness. Furthermore, foreign enterprises may utilize their financial resources to produce their own high-tech goods and services that compete with local firms, resulting in the creation of new competitors.

Foreign direct investment (FDI) may be a major source of investment and development for the high-tech sector, but it is critical to weigh the advantages against possible risks and obstacles, such as intellectual property loss, rivalry with domestic enterprises, and geopolitical issues. It is essential to monitor things such as the nature of the investment, the level of technological sophistication, the regulatory environment, and the strategic goals of both domestic and foreign investors. Investment in technology is important for any economy, and technology transfer may very well be substantially affected by FDI if developing economies integrate mechanisms that drive this transfer in the correct context.It may be argued that in the present day, foreign direct investment is often seen as a crucial component for the economic progress of states, particularly developing countries, for a variety of reasons, including but not limited to the transfer of funds and expertise. Numerous research has been conducted in the economic literature that examined the correlation between foreign direct investment and economic development. In general, foreign direct investment increases capital density, which has an influence on increased workforce productivity, as stated in the International Monetary Fund's research results. The estimate findings using the simplified technique of occasions in countries such as China reveal that the influx of foreign direct investment worsens wealth disparity, and that the inflow of foreign direct investment has a non-linear influence on income inequality. In a similar manner, it was proposed that as unskilled employees get more competent in utilizing technology, their salaries will rise in the long term, by complicating wealth gap with the entrance of foreign direct investment but improving it over time.

Another study focusing on two nations with significant economic relations, one of which is industrialized and technologically developed and is the source of foreign direct investment, while the other is developing and highly reliant on the source. In the given circumstance, foreign direct investment has a significant impact on a developing nation's economic development. Other research, on the other hand, attempted to determine the impact of foreign direct investment on technological investment or technology transfer.[8]

Furthermore, investing in information and communication technologies through foreign direct investment revitalizes host nations' inventive capacities. Using the reasons raised above, I will aim to illustrate how foreign direct investment affects the spread of information and communication technologies. [9] As a result, I will concentrate on three variables to investigate the link between foreign direct investment (FDI) and US IT exports and imports. To evaluate the study hypotheses and achieve the research objectives, I used data from the World Bank's 2013-2020 official figures. The 3 variables: high-technology exports, information and communication technology (ICT) goods exports, information and communication technology (ICT) goods imports, are defined in Table 1.2, by World Bank.

Table 1.2 - Classification of the World Bank of High -Technological Sectors of Economics

High-tech Exports	products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery
ICT Goods Exports	include telecommunications, audio and video, computer, and related equipment; electronic components; and other information and communication technology goods. Software is excluded.
ICT Goods Imports	include telecommunications, audio and video, computer, and related equipment; electronic components; and other

	information and communication technology goods. Software is excluded.

Source: Built by author based on data from World Bank

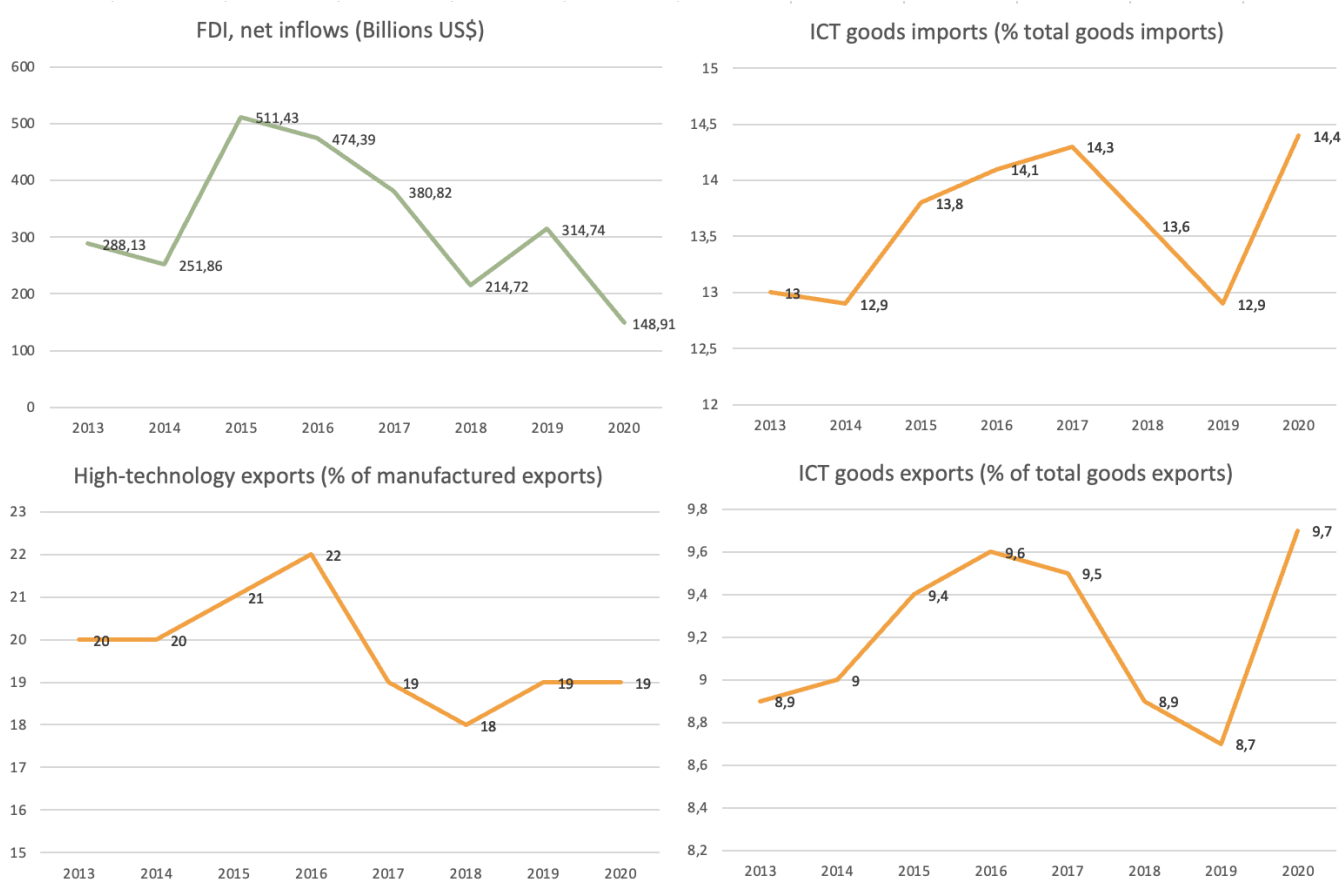


Figure 1.1–Trends of the net FDI inflows and high-tech imports/exports of USA

Source: Built by the author based on data from World Bank

Since we observe a positive correlation between the net inflows of foreign direct investment into USA and the given variables, we can conclude that high level of foreign direct investment has positive effect on high-technology exports, on information and communication technology goods exports and on information and communication technology goods imports.

Finally, foreign direct investment can be proven have a powerful influence on a country's IT exports and imports. In the case of the United States, FDI may both drive and enhance the country's high-technology industry. FDI in the high-tech can contribute to improving manufacturing capacity and industrial output, provide access to new markets and promote expansion. As a result, US enterprises become more competitive in the global economy benefitting the geographical footprint of the country’s business operations. This at the same time can cause a trade deficit in the industry through the increase of IT product import amounts into the states as overseas organisations develop a foothold into the local markets. Ultimately, the relationship between FDI and US high-tech exports and imports is complicated and is influenced by a variety of factors, including the nature of the investment, both the competitiveness of the domestic as well as foreign players, and global economic conditions.

The chapter discusses the role of foreign direct investments (FDI) in the high-tech sector and their impact on the international business activities in the country. FDI can provide access to new markets, attract funding for research and development, and encourage the development of supply chains and clusters in the high-tech sector as well as create job opportunities. However, there might also be negative effects such as the loss of intellectual property and the exodus of people and resources from the domestic high-tech sector. It is essential to monitor the nature of the investment, the level of technological sophistication, and the regulatory environment. The chapter also presents research studies that examine the correlation between FDI and economic development, wealth disparity, and technological investment or technology transfer. The positive effect of foreign direct investment on high-tech exports, ICT goods exports, and imports is highlighted.

CHAPTER 2.

ANALYSIS OF INTERNATIONAL BUSINESS INVESTMENT ACTIVITIESOF HIGH-TECH SECTORSOF THE USA ECONOMY

2.1. Analysis of investment by international business in high-tech sectors of the US economy

The U.S. benefits greatly from the contribution of the information technology (IT) sector. Being at the forefront of exports enables the economy to create well-compensated work opportunities including for non-college-educated personnel. In addition to this it manufactures extremely inventive merchandise and amenities which fuel all-encompassing progress, combat inflation as well as enhance citizens' welfare. The U.S. The technology or IT industry also known as the “tech sector” involves different areas including computing technologies like data storage and processing systems together with information services such as semiconductors and software components. Investment by international businesses in high-tech sectors of the US economy is impacted by various factors. According to Tebaldi (2011), human capital, inflows of foreign direct investments, and openness to international trade are the major factors impacting the performance of a country's high-tech industry in the global market [10]. Human capital, foreign direct investment inflows, openness to international commerce, R&D investment, and high-tech enterprises' resilience to economic downturns are some of the elements that influence foreign corporations' involvement in high-tech sectors of the US economy. Furthermore, Almor (2011) found that high-tech, born global companies are more resilient to economic downturns and can weather economic crises better than traditional companies [11]

The USA economy's high-tech sectors witness significant capital investment and intense competition in international business investment activities that prioritize innovation and cutting-edge technologies. In addition to aerospace and telecommunications fields, the USA has a robust high-tech industry that encompasses biotech and software development sectors. The possibility of high growth and

profitability in these industries is what draws international investors towards them. To benefit from the robust market and infrastructure in the USA, numerous international companies have established their operations.

Figure 2.1 highlights the expanding significance of the IT industry in the US economy. It has stood out in recent decades as one of the most successful strategically significant advanced sectors, significant not only for its size but also for its growth in comparison to the rest of the economy. In other words, the United States is getting more and more specialized in IT while yet having the largest and most varied economy in the world.

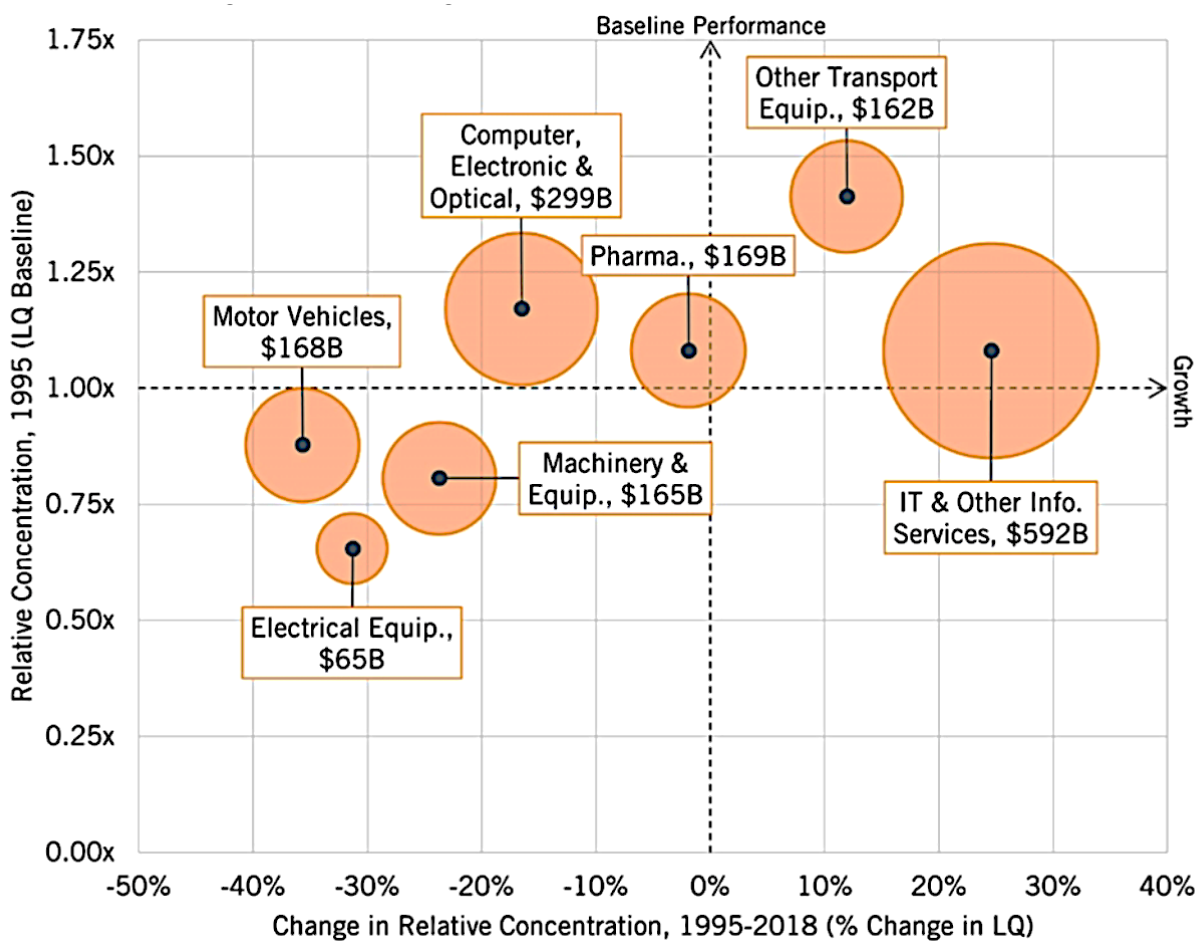


Figure 2.1 - Change in relative concentration of advanced industries in the U.S. economy, 1995–2018 (scaled to production output in 2018)

Source: The Hamilton Index: Assessing National Performance in the Competition for Advanced Industries, Robert D. Atkinson

It is not surprising that international companies are drawn to conducting business in the United States given the country's diverse range of highly competitive high-tech industries. The United States maintains its worldwide competitiveness in these industries by attracting investments from top-of-the international companies in innovative U.S. economic sectors. High-tech industry growth depends heavily on foreign direct investment (FDI). The stock of FDI in high-tech industries has expanded by an average of more than 10% annually since the peak of the economic slump in 2009. The FDI position in high-tech sectors reached more than $1.6 trillion in 2016, a substantial increase from $815 billion in 2009 (Figure 2.2). Nearly 44% of all foreign direct investment (FDI) into the United States in 2016 was high-tech. [12]

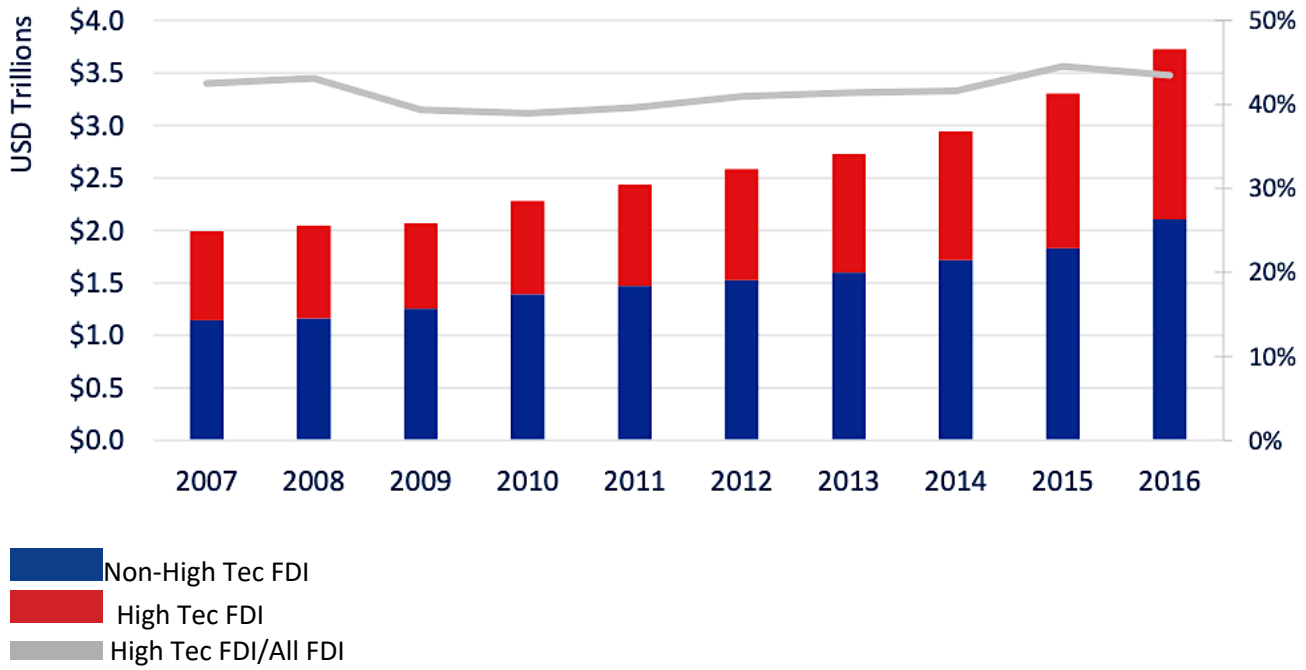


Figure 2.2 – High-tech FDI Position in United States.

Source: Department of Commerce, U.S. Bureau of Economic Analysis, 2017

International companies with US subsidiaries in the country not only contribute to maintaining high-tech employment throughout the country but also significantly boost the economy by significantly contributing to R&D, exports, and value-added activities. According to the findings of Ortega-Argilés et al. (2009), R&D investment has a significant positive impact on labour productivity [13], in addition to being an important support for the development of high-tech industries based on Liu et al. (2019)

[14]. From 2010 to 2015, foreign companies' R&D expenditures increased by an average of 5.3% annually in the high-tech sectors, reaching a total of around $42 billion by that year (Figure 2.3). 74% of all R&D investment by foreign companies in the United States in 2015 was made in high-tech industries. In the high-tech sectors, the value of U.S. goods exported by companies with a majority foreign ownership increased by an average of 5.9% each year from 2010 to 2015, reaching a total of roughly $154 billion in 2015. The most precise indicator of an industry's contribution to the economy is value added, which is obtained by deducting the price of acquired inputs (such as raw materials, energy, etc.) from final sales. Between 2010 and 2020, value added in the IT industry increased by $600 billion (109%) with data processing, internet publishing, and other information services experiencing the fastest growth at 215.1%. The gross domestic product (GDP) of the United States increased overall by 39% over the course of that period. The contributions of foreign-owned firms to value-add activities in high-tech sectors increased by an average of 5.6% each year from 2010-2015 and reached a total of more than $373 billion in 2015.

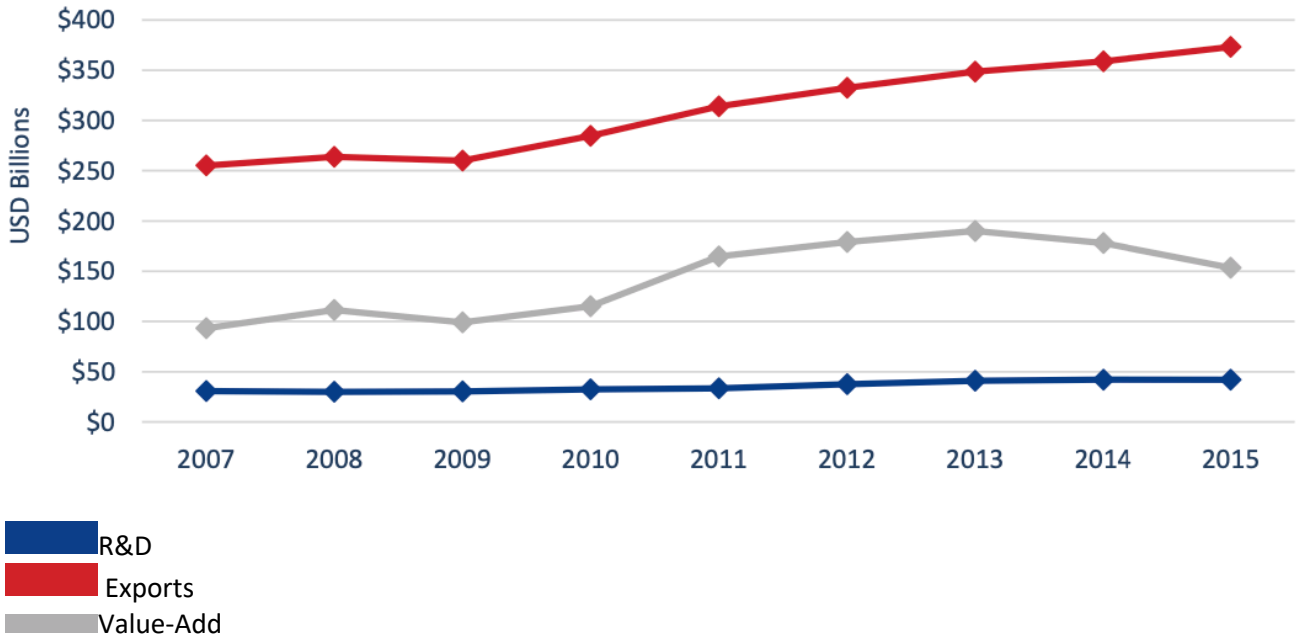


Figure 2.3 – FDI Impact in US High-tech Industry (By majority Foreign-owned US Affiliates)

Source: Department of Commerce, U.S. Bureau of Economic Analysis, Oct 2016

The IT industry employed 4.4% of all private sector employees and made up 3.5% of all business establishments in 2020, making the average IT firm around 27% bigger than the typical private sector firm. [15] However, provided that it pays so well, the IT sector accounted for 9.5% of total private sector wages. (Figure 2.4) The domestic value added generated by the IT sector was $1.2 trillion, or about 5.5% of the US GDP. [16]

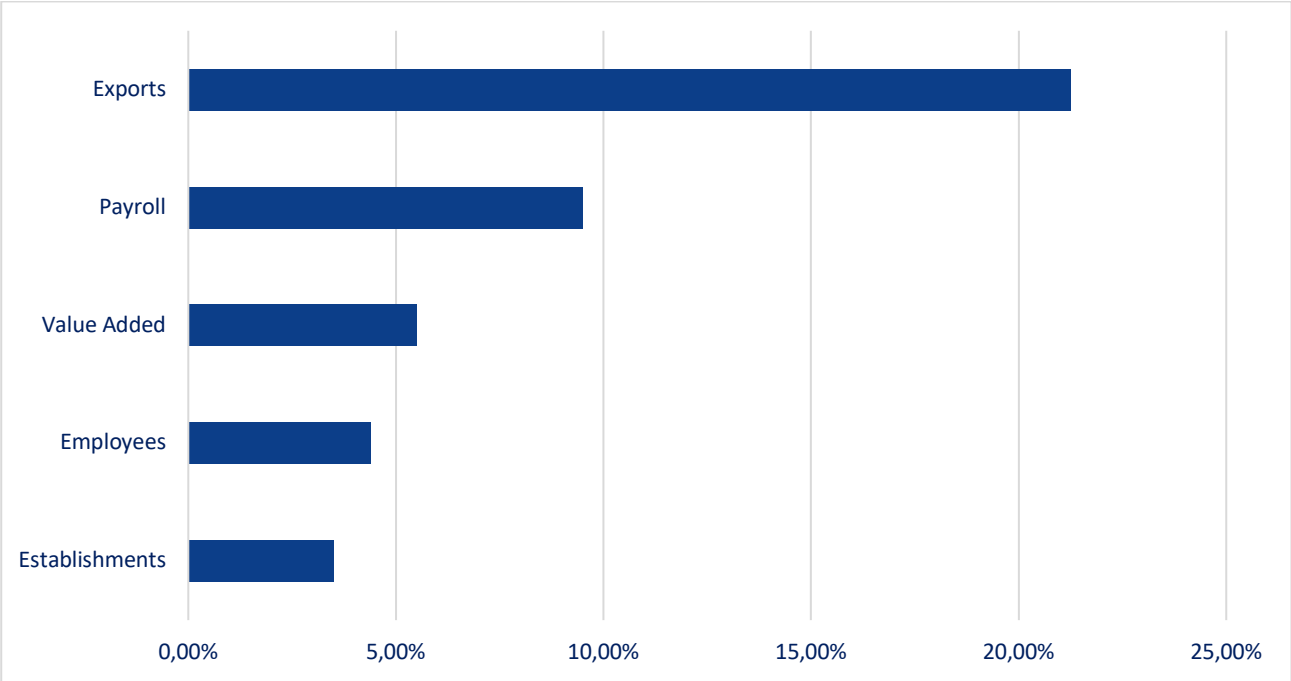


Figure 2.4 - IT industry's share of the total U.S. economy

Source: Built by the author according to US Census Bureau, County Business Patterns Survey 2020; Bureau of Bureau of Economic Analysis, Value Added by Industry data;

As we delve deeper into the sources of this productive FDI, we can observe that Germany, the United Kingdom, France, and Japan are the most significant contributors in the market for R&D investment, exports, and value-added activities in high-tech industries (Figure 2.5). In 2015, the United Kingdom was the main source of R&D spending in high-tech industries, accounting for 17 percent of all R&D spending among foreign-owned enterprises. In 2015, German majority-owned enterprises were the

prime source of U.S. products exports in high-tech industries, accounting for 15.9 percent of overall high-tech exports among foreign-owned firms. Germany was also the greatest contributor to value-added activities in the high-tech industry in 2015, accounting for 14.9% of total value-added activities in the high-tech sector among foreign-owned companies. Great majority US traditional trading partners, such as Germany, the United Kingdom, France, and Japan, have made considerable investments in the United States' high-tech industry, strengthening their partnerships, and deepening their economic ties.

Figure 2.5 – FDI Impact in High-tech by Source Country (% of total)

Source: Built by author based on Department of Commerce, U.S. Bureau of Economic Analysis, 2016

SoftBank Group, being one of the key foreign investors into high-tech in the US, was founded in 1981 in Japan, has a presence today through its corporate and advisory subsidiaries in Silicon Valley, New York and Miami. They have invested in more than 40 companies in America, helping to create thousands of U.S. jobs. They are on track to invest $50 billion in U.S. companies by the end of 2020, both directly and through funds managed by their subsidiaries. They are strongly committed to contribute to U.S. leadership in AI, robotics and 5G connectivity. [17]The table 2.1 below displays the investments made by SoftBank Group in USA over the years 2016-2019.

Company	Amount ($M)	Sector
Flexport	1000	Internet
WeWork	300	Business Products & Services
Doordash	400	Internet
Petuum	93	Software
EdCast	33,6	Internet
Automation Anywhere	300	Software
Brandless	240	Internet
Cohesity	250	Internet
Slack Technologies	250	Internet
Dome9 Security	250	Internet
Packet Host	9,42	Computer Hardware & Services
NextVR	80	Internet
SoFi	1000	Internet

Table 2.1 – Investments made by SoftBank Group in USA (2016-2019)
Source: Built by author based on SoftBank Investment Tracker

The rise of Chinese investment within US high-tech industries is a noticeable trend that has emerged recently. Chinese firms have made significant investments in various fields such as AI technology, robotics, and electric cars among others. As per Liu et al. the move by China from FDI in traditional low-tech industries to a more advanced high-tech manufacturing environment was noted in the (2011) dataset [18]. Leading this shift were two Chinese multinational corporations -Tencent Holdings Ltd. and Alibaba Group Holding Ltd. These companies are also among the names that have significantly contributed into the development of companies like Tesla, Epic Games, Reddit, Magic Leap and Lyft. Sequoia Capital's contribution to multiple high-tech companies including Apple and Google among others has been immense since it is a prominent venture capital firm. Sequoia's involvement in successful IPOs includes Dropbox and Zoom. Index Ventures, a European venture capital firm with dual headquarters in San Francisco and London, is also considered an important investor in

technology-enabled companies in US with a focus on e-commerce, fintech, mobility, gaming, infrastructure/AI, and security. Dropbox, Zendesk, and Slack are among them.

The information technology sector is also known as one of the major sources of well-paying jobs for US residents. In the year 2020, the average yearly salary per employee in the IT field totalled $122,270, which is roughly 117% more than the average private sector wage in the country. According to the Department of Commerce's recent study on the digital economy, nominal compensation for professionals in the digital industry soared at a 6.0 percent annual pace from 2012 to 2020 and 7.3 percent from 2019 and 2020. [19]. Foreign majority-owned firms directly supported more than 6.8 million jobs in the United States in 2015. Nearly 31 percent of these jobs, or 2.1 million, were in high-tech industries. FDI alone directly supported 11.6 percent of all U.S. high-tech workers in 2015 (Figure 2.6). United Kingdom was the largest foreign employer of workers in the high-tech industry, directly supporting more than 288,200 jobs during the same year. Japan followed as the second largest foreign employer, directly supporting more than 285,700 jobs in high-tech. Since 2007, French firms experienced the most growth (50 percent) in terms of the number of high-tech jobs supported in the United States. (Figure 2.7).

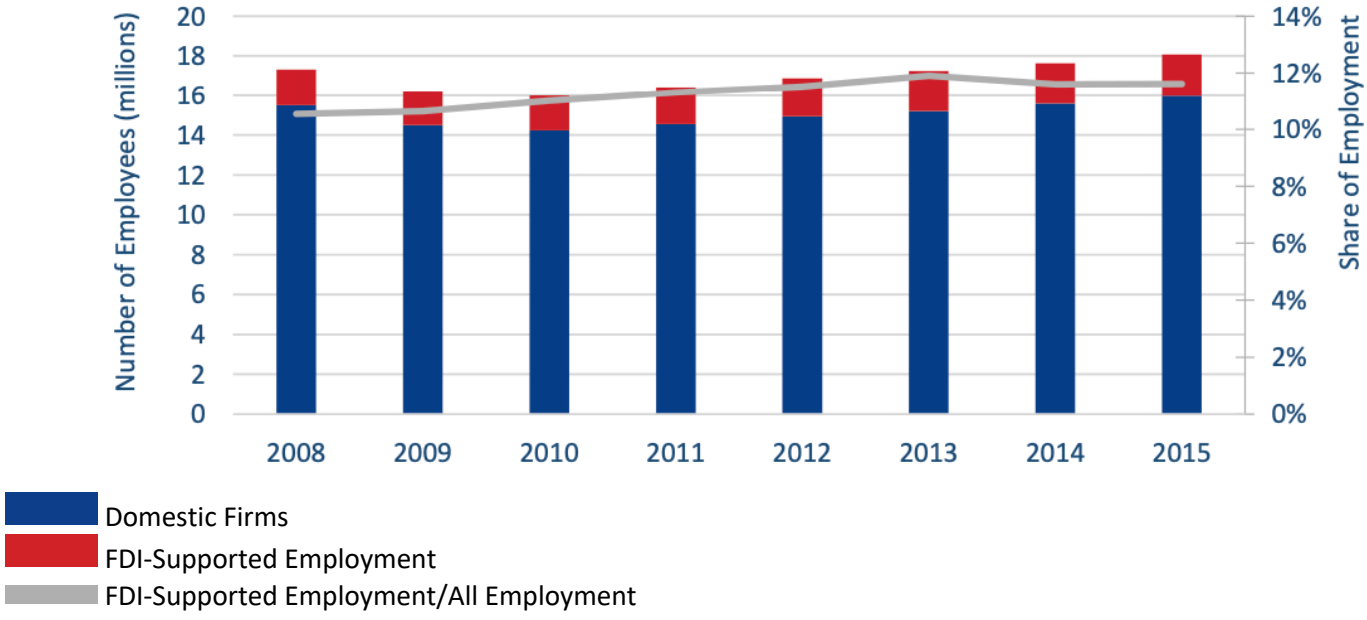


Figure2.6 – FDI supported High-tech Employment (By majority Foreign-owned US Affiliates)

Source: Department of Commerce, U.S. Bureau of Economic Analysis, Accessed Aug. 17, 2017. FDI-Supported high-tech employment.

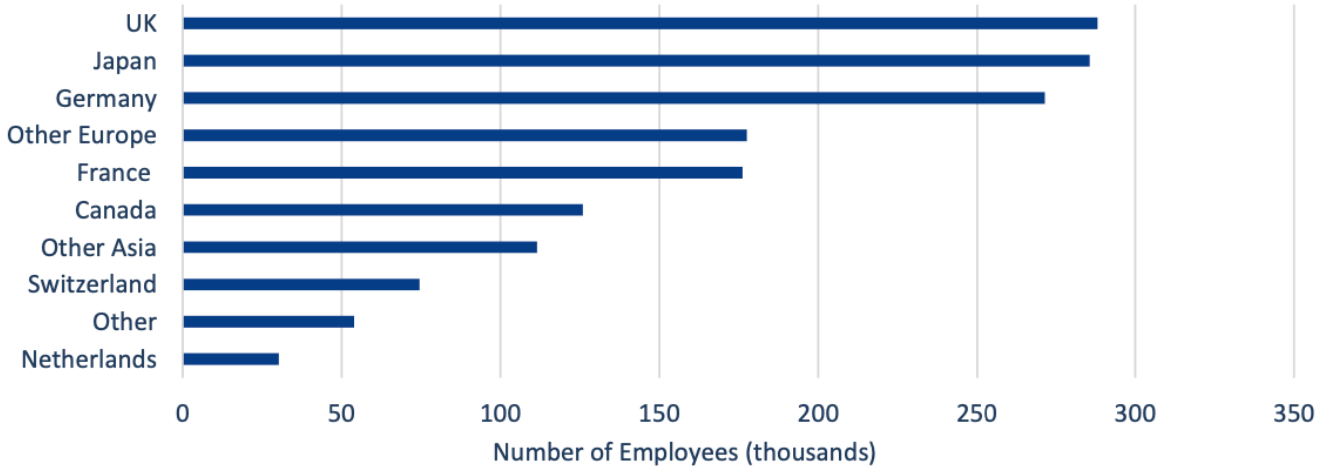


Figure2.7 – Sources of High-tech Employment ((By majority Foreign-owned US Affiliates)

Source: Department of Commerce, U.S. Bureau of Economic Analysis, Accessed Aug. 17, 2017

In conclusion, high-tech industries play a significant role in fostering growth in the U.S. economy. High-tech industries in the United States employed nearly 18.3 million people in 2016 and accounted for nearly $3.9 trillion in value- added activities and more than $7.1 trillion in gross output. The impact of the high-tech sector is strongly felt; these industries represent only 14.6 percent of all U.S. employment but contributed nearly 25 percent of total output in the United States in 2016. Just as global investment benefits international firms, foreign direct investment plays a significant role in furthering the competitiveness of the U.S. high-tech sector on a global scale. The U.S. FDI position in high-tech industries amounted to more than $1.6 trillion in 2016, or nearly 44 percent of total FDI in the United States. These U.S. affiliates of international businesses directly supported nearly 2.1 million U.S. jobs in the high-tech sector in 2015. Additionally, U.S. affiliates of international businesses in the high-tech sector spent a total of nearly $42 billion in research and development in 2015. The value-add of foreign investment in high-tech has been growing at a faster rate than the value-add of domestic high-tech for the past seven years. FDI in the high-tech sector

continues to grow and to support the competitiveness of the U.S. economy in global markets.

2.2. Modern trends in the development of the US high-tech market

The level of development of high technologies in each country is determined by the volume of exports. According to Global Insight World Industry Service database, in the last decade the volume of the world export of high-tech products doubled and amounted to 2.3 trillion dollars. Among high-tech products, the majority of which are information and communication technologies (ICT), most of the exports go to developed countries (US$1.4 trillion). Export countries, developing is estimated at 0.9 trillion dollars. The main centres where world's technological resources are concentrated are considered the United States, Japan and developed countries of Western Europe [20].

In the second half of the 20th century, the United States took the world leadership in the field of research and development. The rapid growth of public and private investments in research and development has helped the United States take the position of a global economic leader. The technology sector is the economic star of the United States, driving the growth of the country's economy as well as its financial markets. IT and communications companies are at the heart of innovation, rapidly changing people's lives and transforming business, finance and the economy in general. America's largest technology companies operate in a wide range of industries with products and services that disrupt traditional ways of doing business or create new models that revolutionize entire sectors. Obtaining high-tech products and services with high added value, the actors of the technical industry are engaged in fierce competition to acquire and maintain their share in a number of highly profitable markets [21].

The USA is consistently among the top five countries in terms of both export and import volumes of high technologies, despite the growing competition. As stated before, the United States takes the lead in the telecommunications market, software, computer and information technologies, where the most famous representatives are such giants as Apple, Cisco, Hewlett-Packard, IBM, Intel, Microsoft. Today the

country dominates in the export of computer equipment (75%) and software (65%). It remains a world leader in the field of innovation, although today most research and innovation is directed to products that are produced abroad and then exported back to the US. The main trends in the high-tech sector are the development of social media platforms and the active implementation of "cloud" technologies.

In recent years, the market of the US IT industry has somewhat weakened its position due to the oversaturation of smartphones and tablet computers, which caused a drop in their sales worldwide. Since 2011, there has been a trend when the company supplies the market with products that differ only in details. Given the large number of distributors, there is competition between the products of the same manufacturer. As a result, three types of competition emerge on the market: between brands; between products within the same brand; between versions of the same software product. The penetration of Chinese companies into the American market poses a certain threat to the USA. For example, the world-class giants Alibaba and Tencent (whose market value is about 500 billion dollars), having developed a new computer system, are competing with Facebook for the information market.

High-tech industries are an essential part of the U.S. economy, providing about 12% of all jobs but producing almost 23% of output. Although they were hit harder by the 2000–01 recession, they were largely insulated from the effects of the 2007–09 recession. While overall high-tech employment has remained relatively stable as a share of total employment, the high-tech sector has seen dramatic shifts from manufacturing to services, which now account for 52,6% of all high-tech employment and is projected to increase to 56,4% by 2024.

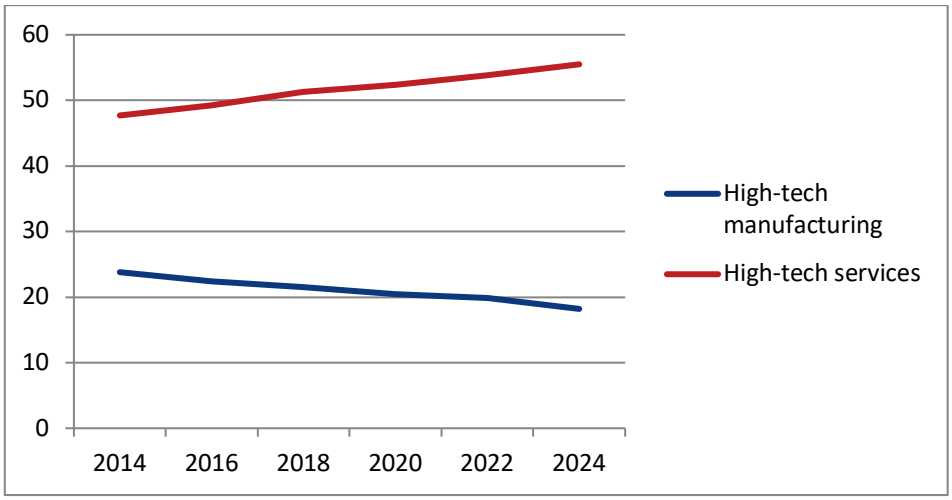


Figure 2.8– Annual share of total high-tech employment, 2014-2024

Source: U.S. bureau of labor statistics.

The instrument of state support for the high-tech sector of the American market is hidden protectionism. Recently, the administration of President Trump, citing the country's national security interests in the field of wireless technology, blocked the takeover of the American microprocessor manufacturer Qualcomm by the Chinese company Broadcom. To reduce the competitive opportunities of Chinese companies, a ban has been introduced on the sale of programs used in sensors, drones and satellites to automate the recognition process. At the beginning of 2020, the US government introduced restrictions on the export of artificial intelligence technologies [22].

The development of innovative sectors of the economy in the country is characterized not only by the share of export of high-tech products, but also by the number of companies engaged in its production. Companies immersed in the high-tech world range from huge corporations (Microsoft, Intel, Amazon.com, etc.) to small start-ups. In table 2.2. we will present the main companies-players of the US high-tech market.

№	The company name	Market capitalization (billion dollars)
1	Nvidia	90,9
2	SpaceX	12
3	Amazon	479,3
4	23andMe	1,1
5	Alphabet	673,9
6	Kite Pharma	5,7
7	Regeneron	55,5
8	Spark Therapeutics	1,9
9	First Solar	4,3
10	Intel	160

Table 2.2 - Top 10 US companies in the high-tech market in 2020
Source: Built by author based on MIT Technology Review ranking.

However, in April 2020, the World Intellectual Property Organization announced that at the end of 2019, China surpassed the United States for the first time and became the world leader in international patent applications, and the telecommunications giant Huawei Technologies topped the list of companies for the third year in a row, having increased investments in R&D last year by 30% At the same time, the company invested at least 18.6 billion US dollars in the development of the 5G network, becoming the undisputed world leader in high-speed Internet in the world. There are no companies in the world today that invest so much in the development of high technologies [23].

With over 585,000 tech companies, the U.S. tech industry was estimated to reach a market value of $1.8 trillion by the end of 2022. There were 264500 tech industry jobs added to the market in 2022, employing roughly 12.2 million workers as

of 2020. The tech market accounts for 35% of the total world market and is expected to grow by 5.4% in 2023.

2.3. Risks of foreign investment in the high-tech sector of the US economy

World experience shows that an essential feature of the internationalization and trans-nationalization of the economy, as manifestations of globalization processes, is the acceleration of the movement of international capital and the growth of foreign direct investments. Direct foreign investment for the recipient country has a number of positive and negative consequences, therefore, to ensure the economic security of countries and their sustainable development, a balanced foreign investment strategy and skilful operational management of international capital flows are necessary.

World economic history proves that the attraction of resources in the form of foreign investments is an effective means of raising the national economy, but this process should be based on a national strategy, a system of incentives, restrictions and benefits that would ensure optimal compliance of the interests of capital importers with the strategic objectives of the country receiving them. The United States relies greatly on foreign inflows to compensate for a shortage of savings at home, and it routinely ranks among the most favourable destinations for foreign direct investors.There are a number of risks associated with the FDIs. One of its major risks is the potential for expropriation of intellectual property, which can be a concern for foreign high-tech companies investing in the US. High-tech companies invest significant resources in research and development, creating valuable intellectual property (IP) assets. Foreign investors may have access to proprietary technologies and trade secrets, which could increase the risk of IP theft or unauthorized replication. This can compromise the competitive advantage of US companies and potentially harm innovation and economic growth. However, firms can mitigate this risk by taking local trustworthiness into account when making investment decisions. Firms prefer to invest in regions where local partners and employees are considered more trustworthy [24].

High-tech businesses frequently deal with sensitive technology that might be used in military applications or have an impact on essential infrastructure. Given that it could entail having access to private information, having control over vital

infrastructure, or being exposed to advanced defence technology, foreign investment in these areas might raise questions regarding how to preserve national security interests. Foreign capital flows into the high-tech sector may indirectly lead to the transfer of cutting-edge technology and know-how abroad. This transfer may take place as a result of joint ventures, cooperative initiatives, or technology licensing agreements. While information exchange may prove advantageous, there is a chance that it could undermine the US technological supremacy by allowing rivals from other countries to eventually catch up.

Foreign investment in the high-tech industry may be significantly impacted by changes to legislation and regulations. Restrictions on trade and exports can result in supply chain disruptions, challenges with market accessibility, or alterations to immigration laws or create barriers to talent acquisition. Governmental and regulatory ambiguity can make investment decisions more difficult and have an impact on international investors' profitability and operational stability.

Another risk foreign investors face is the risk of funding high-tech businesses that might see their market demand decline or struggle to keep up with quickly changing trends. The high-tech industry is subject to economic and market fluctuations. The commercial environment can be rapidly transformed by changes in customer demand, technical improvements, or disruptive inventions. Profitability and sustainability may also be compromised by market volatility or economic downturns.

Geopolitical tensions and diplomatic conflicts between countries can as well negatively influence foreign investments in the high-tech sector. Policy changes, restrictions on market access, or enhanced scrutiny of foreign investments may result from trade disputes, sanctions, or political disputes. The changing geopolitical landscape can create an unpredictably volatile investment climate and influence investor perceptions of stability and risk in the host country.

Another risk is the impact of extraterritorial enforcement of laws such as the US Foreign Corrupt Practices Act (FCPA) on foreign direct investment in high-

corruption-risk countries. A mid-2000s increase in extraterritorial enforcement of the FCPA had a significant deterrent effect on foreign direct investment in high-corruption-risk countries, including in the high-tech sector [25].

Concerns with foreign transactions are typically associated with mergers, acquisitions, and takeovers of domestic firms rather than new investments, known as "greenfields". The U.S. government, much like its peers around the globe, has passed legislation that empowers federal agencies to review foreign deals that could cause significant outsourcing of jobs, a loss of control over agricultural supply chains, the sharing of sensitive technologies, or impairment of critical infrastructure.

The domestic value added produced by the IT sector in 2020 was $1.2 trillion, or about 5.5% of the US economy. If we distinguish investments in high technologies by the origin of capital (Figure 2.9), then in the projects of the USA the largest share of involved investments is national (ranging from 66 to 78%).

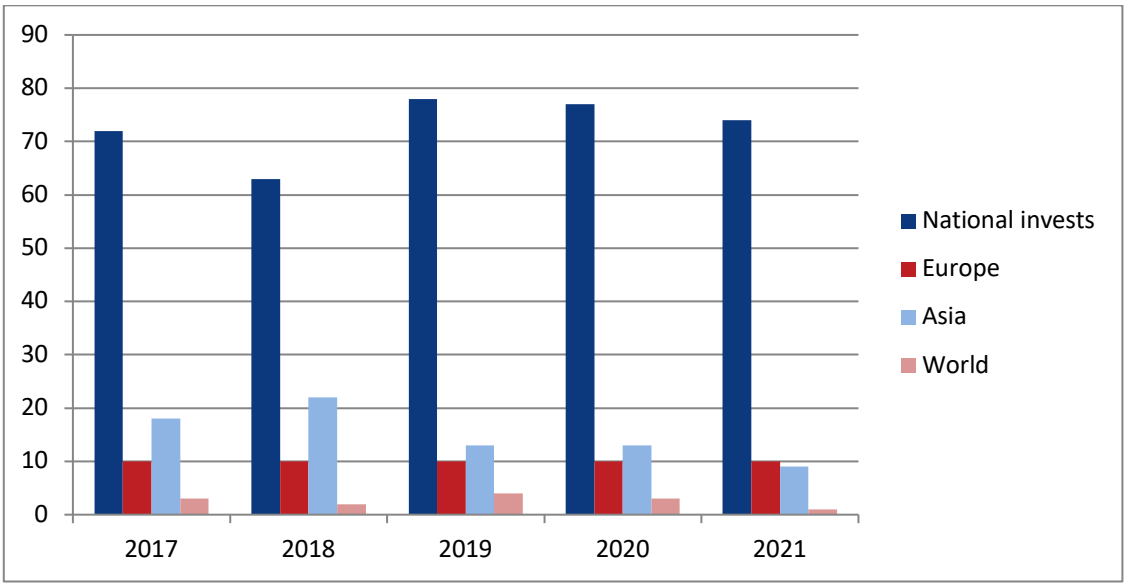


Figure 2.9 – The structure of investments in the high-tech industry of the USA by the origin of capital

Source:[26]

In general, highlighting the areas of investment attraction, the Deep Tech industry (technologies that are based on serious engineering innovations or scientific

achievements and discoveries) is the fastest growing. This group includes advanced manufacturing and robotics, blockchain, agricultural technologies, artificial intelligence (AI) and Big Data (a field of technology dedicated to the analysis of large arrays of raw data with modelling of intelligent behaviour in computers), which according to the average 5-year increase investments in early rounds increased by 109%, 121%, 128% and 98%, respectively [27].

In modern conditions, the countries are faced with the task of developing their own system for monitoring the global business environment and responding to global threats. There is also an open question regarding the strategy that should be followed to restore economic growth in the post-crisis period: strict austerity and reduction of budget deficits or increased monetary stimulation of the economy.

When investing, companies also take into account secondary factors:

- cooperation in as many countries as possible;
- the level of competition;
- the level of import duty rates or transport costs.

In addition, companies that invest in the high-tech sector also face certain risks. The risk faced by investor companies is classified into three groups: commercial; additional; due to the peculiarities of the US investment climate. The degree of commercial risk is influenced by the following factors: solvency of buyers; behaviour of competitors; the possibility of exporting its products from Ukraine to other countries. The special, additional risks that arise when investing in a foreign country are very difficult to estimate, but they must be taken into account. For example, differences in the mentality and culture of different countries. A specific economic problem of investing abroad is the risk associated with fluctuating exchange rates. Investors also consider the risk associated with the investment climate, that is, the regulatory structure and business climate in the country.

Significant threats can come from direct foreign investments, primarily due to the increased dependence of the economy on foreign capital. The deterioration of the global economic situation will lead to the curtailment of some productions within the country. In this sense, productions that are completely provided with imported

components and have neither their own technologies nor the ability to diversify sources of supply are also dangerous.

Thus, an important component of the economic policy of the US government regarding foreign investments is the proper regulation of the processes of their attraction and use. In the case of inefficient state regulation of the specified processes, the positive effect of foreign investments may become insignificant, and sometimes even disappear.

2.4. Analysis and prospects of attracting US foreign investment to the high-tech sector of Ukraine's economy

Currently, foreign direct investment (FDI) is a stable source of capital inflows. Therefore, from the point of view of predictability and financial stability of the state, it is more expedient to stimulate the attraction of direct foreign investments.

The share of foreign investments in the structure of Ukraine's GDP in recent years was relatively insignificant and fluctuated between 3-5%, which confirms the difficulty of attracting financial resources from abroad to the national economy.

In the market of high-tech products, no more than seven powerful post-industrial countries can be singled out, which, based on an intensive innovation process, create leadership developments and, on the basis of bilateral and multilateral agreements through the World Trade Organization, determine the rules for the exchange and use of high-tech products.

Ukraine is significantly inferior to post-industrial countries, but in order to develop its own high-tech sector and preserve achievements in this area, it must develop forms of interaction with leaders of high-tech business, especially with international TNCs, and develop its own forms of integration.

The United States is both the world’s largest foreign direct investor and the largest beneficiary of foreign direct investment (FDI). But like every sovereign country, it has sought to temper its embrace of open markets with the protection of its national security interests. Achieving this balance, which has shifted over time, has meant placing certain limitations on overseas investment in strategically sensitive sectors of the U.S. economy.

Ukraine lags far behind the average indicators of EU countries in the indicators of opportunities in the field of information technologies and the potential of innovations in industry. In this aspect, Ukraine does not have such advantages as the USA, which has a fairly favourable structure of industry in terms of indicators of potential technological intensity, especially if we consider the structure of only the manufacturing industry.

Ukrainian engineers and scientists often have unique innovative developments. However, about 95% of them are not ready for implementation due to the lack of understanding of the market to which they offer their technologies, business education.

Analysing the forms and methods of development of competition in international investment and innovation activity, the importance of the state in the formation of the investment environment should be highlighted. The state actively promotes the development of programs for attracting and using investments, participates in the management of processes and risks in innovative activities. The influence of the state is aimed at maximum support of its own innovative potential, leading scientific and design centres, as well as at ensuring the implementation of a scientific and technical policy that corresponds to the world level [28].

In the practice of state management of innovative development of the world's leading countries, various forms, methods, and tools for the successful implementation of state science and technology policy have been formed, and this experience should be considered and used in the formation of Ukraine's own strategy for obtaining competitive advantages in the field of R&D and commercialization of innovations (Table 2.3).

Mechanisms of state management of technological and innovative development in the countries of the world	Formation of tools and mechanisms of scientific and technological development of Ukraine		
SBIR program (Small Business Innovation Research Program)	Providing start-up capital to small businesses and helping them participate in government-funded R&D	Fund for promoting the development of enterprises in the scientific and technical sphere	Allocation of so-called "seed" financing

SBIC Program (Small Business Investment Companies Program)	Creation of additional conditions for venture companies and small businesses in investments at the start-up stage and at the growth stage	Venture innovation funds with the participation of local self-government bodies	Diversification of risks and expansion of volumes of mixed financing of innovative projects
SBTR Program (Small Business Technology Transfer)	Support of contract works of state research organizations for small business enterprises	A joint government program with corporate structures on the development	Diversification of forms of transformation of knowledge into goods

Table 2.3– System of measures to support the Ukrainian high-tech market

In the USA, the main factor of economic growth in high-tech sectors and industries is determined not by capital and means of production, but by knowledge and new ideas that ensure the introduction and production of competitive products with a high level of intellectualization of labour. The dynamic development of states and the high quality of life of the population in modern conditions are largely ensured by the innovative and intellectual character of the economy, which is formed as an integral indicator of the effective use of aggregate factors: a high technological level of the national economy, a developed institutional business environment, effective use of human resources and established competitive advantages in high-tech sectors of the world economy.

An important factor restraining the development of high-tech production in Ukraine is the lack of investments. Currently, the demand for investment resources in the world market significantly exceeds the supply, so the appearance of Ukraine on it immediately forces it to wage a fierce competition for investments with various countries [29].

Figure 2.10 shows the dynamics of the volume of attracted foreign direct investment in Ukraine in recent years.

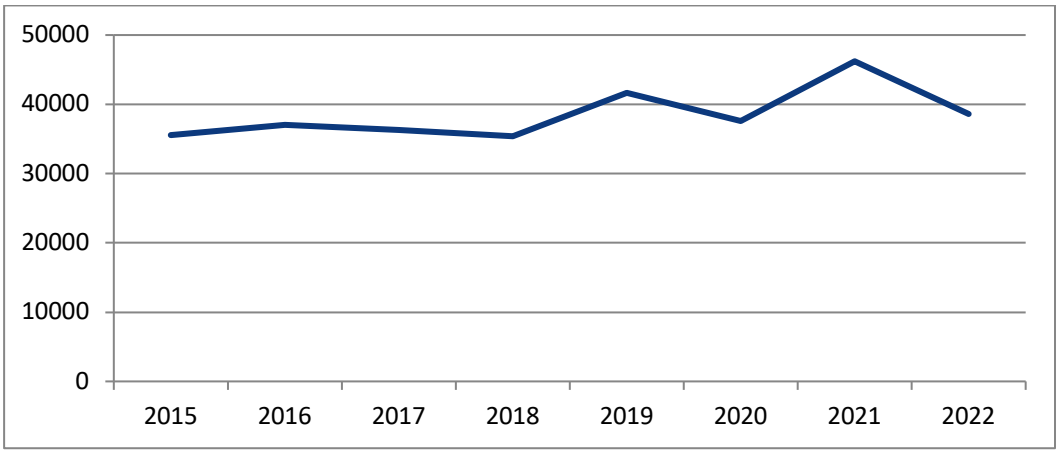


Fig. 2.10 - Dynamics of the volume of attracted foreign direct investments in Ukraine in 2015-2022 (million USD)

Source: Built by author based on the statistical informationof National Bank of Ukraine.

It is important to analyse the inflow of foreign direct investments by donor countries (Table 2.4).

Investor country	**Volumes of direct investments as of 31.12. 2021 (million USD)**	**Specific weight, %**
Cyprus	12300,5	26,62
Netherlands	10640,5	23,02
Switzerland	4003,3	8,66
Germany	2101,0	4,55
Great Britain	1885,1	4,08
Austria	1335,6	2,89
Luxembourg	1233,5	2,67
USA	1175,7	2,54
France	1019,6	2,21
Poland	817,9	1,77
Hungary	459,0	0,99
British Virgin Islands	438,6	0,95
Sweden	409,2	0,89
Italy	302,7	0,65
Turkey	295,2	0,64
Denmark	267,7	0,58
Singapore	251,5	0,54
Slovakia	249,5	0,54
Belize	230,1	0,50
Japan	223,6	0,48
Czech Republic	219,0	0,47
Azerbaijan	182,8	0,40

Lithuania	173,6	0,38
Others	5163,2	11,17
Total	**46212,8**	**100,00**

Table 2.4 - Direct foreign investments from the countries of the world in the high-tech industry of Ukraine

Source: Built by author based on statistical informationof National Bank of Ukraine.

As we can see, by the end of 2021, the share of US investments in Ukraine is not high enough, but significant. This trend indicates the possibility of funding growth in the future.

It is important to note that the unsatisfactory diversification of the sources of attraction of US foreign direct investment to Ukraine may be a risk of the country's economy depending on the policies of several countries - the main investors.

The key tasks for the implementation of further reforms in the industrial sector should be the following [30]:

1. Creation of basic conditions for the development of industry and ensuring access of enterprises to production resources and infrastructure by eliminating existing institutional, regulatory, and other barriers that wash away resources and put Ukrainian enterprises on the verge of survival, creating unequal conditions for them compared to foreign competitors.

2. Stimulation of structural changes in industry, which requires inclusion in the agenda of economic reforms of the implementation of the "new industrialization" policy in Ukraine. Its main principles in the modern sense are increasing the competitiveness of the national economy based on the development of new and transformation of traditional industries using the potential of high technologies according to "Industry 4.0".

3. Activation of the joint production space of Ukraine and the USA. The economic preconditions, the fulfilment of which gives the country prospects for EU membership, presuppose the presence of a developed market economy in the country

and the ability to meet the tough competitive conditions established in the US domestic market.

It is also important to note that foreign investment could as well pose threats to our state, namely [31]:

– artificial prolongation of the life cycle of morally obsolete goods and technologies on the market, which solves the problem of oversaturation of the market of the donor country and the problem of disposal. The exchange of advanced technologies takes place primarily between highly developed countries;

– relocation of environmentally hazardous production, which contributes to reducing the level of pollution in donor countries and, therefore, solve the problem of greening the economy. This will exacerbate the problem in recipient countries;

– investing for the purpose of establishing control and liquidation of enterprises to eliminate competitors. The formation of structural unemployment is also possible due to the competitive struggle of enterprises with foreign capital and enterprises with national financial resources;

– establishment by foreign investors of control over raw materials for the purpose of their further exploitation and preservation of their own raw material base;

– outflow of capital from the country due to the repatriation of profits to the investor's country.

Regarding the prospects of attracting foreign direct investment from the USA for the development of high-tech industry, we note that the full-scale invasion of Russia into Ukraine has already caused significant negative consequences for the world economy, superimposed on the consequences of the COVID-19 pandemic. All indicators of macroeconomic activity, as well as the attraction of investments in the national economy, will be considered through the prism of war.

In Ukraine, there is significant destruction of industrial and civil infrastructure, excessive damage has been caused to the environment and ecology; hundreds of bridges, thousands of kilometres of roads, hospitals and educational institutions were

destroyed or damaged, energy, water, heat, and gas supply facilities were damaged in many regions [32].

However, it is also important to focus on solving the problems that prevent the attraction of US investments (overcome corruption, ensure equal and transparent business conditions, etc.), which will determine Ukraine's investment attractiveness. It is important to ensure the fair operation of the judicial system; honest, efficient, and transparent work of state authorities (old practices and non-transparency will not be allowed in the management of public expenditures; in business administration there must be maximum facilitation, transparency, and equal conditions).

The trust of American investors in Ukraine will lead to the return of human capital and the attraction of investments in the development of the high-tech sector and the economy in general. [33]

CONCLUSION

In conclusion, the high-tech industry is a crucial driver of global economic growth and development. The high-tech industry presents new opportunities for companies, investors, and governments to take advantage of cutting-edge technologies and promote innovation in a variety of areas as technology continues to advance. International business investment activities have become an increasingly essential component of the high-tech industry, as corporations strive to expand their reach, gain access into new markets, and acquire the newest technology.

The research presented in this paper shows how crucial foreign business investment activities are for stimulating development and innovation in the high-tech industry. The theoretical framework introduced in the first chapter underlines the importance of international investments in the high-tech sector and offers a framework for comprehending the many international investment kinds and their effects on the growth of global trade. The second chapter provides a thorough examination of the investment climate in the US high-tech industry, including information on current trends, dangers, and possibilities related to foreign investment.

This paper mainly dealt with the international business investment activities in the high-tech sector of the United States. The first part of the paper lays out the theoretical underpinnings of the idea of international corporate investment activities and discusses how it relates to the high-tech industry. The chapter covers the nature of international business investment activities, the classification of international investments, and the role of foreign investments in the high-tech sector and their influence on the growth of international business. It highlights some of the main ways of investing into foreign markets (Foreign direct investment, joint ventures, strategic alliances, and exporting). Includes the benefits and challenges fostered by international investments. In addition to providing insights on how to thrive in international commercial investment environment the chapter also presents analysis on how the international flows contribute to the economic growth of both the investing and host

country. The characterization of international capital flows may vary. The chapter contains information regarding the classification on international investments based on their scale, maturity, purpose, utilised financial instrument, direction, nature and starting point. An investment's size, source, and time span can assist investors estimate their risk and return potential and create a diversified portfolio. The chapter also discusses the role of foreign direct investments (FDI) in the high-tech sector and their impact on the international business activities in the country. Highlighting its positive and negative effects.

The second chapter provides a comprehensive overview of the investment landscape in the US high-tech sector, including an analysis of investment by international businesses in high-tech sectors, modern trends in the development of the US high-tech market, and the risks and opportunities associated with foreign investment in the high-tech sector of the US economy. The chapter supports the data with various evidence ranging from the employment (United States employing nearly 18.3 million people in high-tech, which accounts for almost $3.9 trillion in value-added activities and more than $7.1 trillion in gross output) to the impact of the high-tech sector on a global scale(the U.S. FDI position in high-tech industries amounting to more than $1.6 trillion or nearly 44 percent of total FDI in the United States). In addition to that, the chapter also highlights the latest trends in the sector. With over 585,000 tech companies, the U.S. tech industry was estimated to reach a market value of $1.8 trillion by the end of 2022. There were 264 500 tech industry jobs added to the market in 2022, the tech market was estimated to account for 35% of the total world market and is expected to grow by 5.4% in 2023. The chapter also provides insight for the successful implementation of state science and technology policy to be considered and used in the formation of Ukraine's own strategy for obtaining competitive advantages in the field of R&D and commercialization of innovations. Since the significant destruction of industrial and civil infrastructure by the Russian government, Ukraine faces a number of challenges in attracting new FDI into the country. With more effort on solving the internal problems that prevent the attraction of US

investments we can ensure the fair operation of the judicial system; honest, efficient, and transparent work of state authorities which in turn will increase the trust of American investors in Ukraine and eventually will lead to the return of human capital and the attraction of investments in the development of the high-tech sector and the economy in general.

The conclusions and suggestions made in this paper can assist companies, investors, and governments in navigating the complex and dynamic high-tech industry landscape and promoting sustainable economic growth and development. For companies and investors looking to increase their market share and gain access to cutting-edge technology, the examination of the investment environment in the US high-tech industry is an invaluable resource. Policymakers may create effective laws and regulations to assist the expansion of the industry by exploring the risks and possibilities connected with foreign investment in the high-tech sector of the US economy.

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Збірник тез здобувачів вищої освіти факультету міжнародної економіки і менеджменту укладено за підсумками їх досліджень, представлених на науковій конференції КНЕУ 17 квітня – 20 травня 2023 р. Доповіді здобувачів присвячено інноваційним проєктам для післявоєнного відновлення та розвитку України.

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- Run an external vulnerability scan of Internet-facing systems and fix any serious problems found.
- Ensure that backup processes are in place for critical systems and that critical business data is regularly backed up offline.

While pragmatic improvements to cybersecurity defenses can be made, effective security monitoring is vital to ensure timely detection and response to any intrusion. The average time between the initial breach and the launch of the malware is now measured in days rather than weeks or months. Thanks to this, people and any citizens can take up the protection of information security by:

- Understanding cybersecurity monitoring capabilities across your network infrastructure to ensure strong incident detection and prevention tools are in place and have adequate coverage of your business, systems and data.
- If you have a cyber threat intelligence team, have them look for specific signs of compromise (IOC) based on tactics, techniques, and procedures (TTPs) associated with the state or organized crime groups involved in the current conflict.
- Consider partnering with cybersecurity vendors for managed detection and response services to expand your capabilities or provide skilled support for critical needs.
- Make sure employees have access to authoritative sources of information about the current crisis and are aware of the risk of phishing and fake crisis websites.
- Offer cybersecurity advice to employees in high-risk positions and locations.
- Consider emergency support to manage security features as usual, sort through an increased volume of security alerts, and implement urgent security improvements.

After the war, measures will definitely be taken with new young specialists to protect information in Ukraine.

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IMPLEMENTATION OF US EXPERIENCE IN THE DEVELOPMENT OF THE HIGH-TECH SECTOR OF UKRAINE

Today, neo-industrialization, digitization, digitization, the emergence of new high-precision technologies and automated production stimulate rapid changes in the systems of economically developed and developing countries. The latest technologies are designed to completely change management models and business processes, and modern digital ecosystems are becoming the basis

for the emergence and growth of new global markets.At the current stage of economic development of Ukraine, there is a need to structure the high-tech sphere of the national economy, which in the future will contribute to a clearer development of strategic documents, programs to support the development of high-tech enterprises, and therefore the appropriate use of budget funds. The USA can serve as an example of the development of an effective high-tech sphere. Thus, it is advisable to improve the domestic approach to the structuring of the high-tech sector, taking into account foreign experience and its adaptation to the Ukrainian economy [1].

It is worth noting that there is no single definition of the concept of "high technologies" in modern scientific literature. In the USA, there are several organizations that study this issue and try to clearly state it. The American Electronic Industry Association (AeA) also uses expert and commodity approaches, however, based on the NAICS (North American Industrial Classification System) classification.This organization considers industries to be high-tech if they involve the production of industrial products based on high technology or the provision of communication and technology services and software development.

In addition, in the USA, each individual state has the right to make changes to generally accepted classifications and independently determine exactly those high-tech industries whose development will be stimulated in a specific territory.

The USA economy ranks first in the world. The country's economic leadership is determined by the leading role of the government in the development of the national scientific, technical and innovative sector. Based on the experience of the USA in the implementation of the national policy of the high-tech sector, we can trace the confirmation of the importance of the role of public-private partnership in the formation of a favorable legal and institutional framework for the functioning of the innovation economy.

In the USA, the main factor of economic growth in high-tech sectors and industries is determined not by capital and means of production, but by knowledge and new ideas that ensure the introduction and production of competitive products with a high level of intellectualization of labor.The dynamic development of the state and the high quality of life of the population in modern conditions are largely ensured by the innovative and intellectual nature of the economy, which is formed as an integral indicator of the effective use of aggregate factors: a high technological level of the national economy, a developed institutional business environment, effective use of human resources and established competitive advantages in high-tech sectors of the world economy.

In Ukraine, the main criterion of high-tech production is the specific weight of the revenue of high-tech products in the total volume of the company's products. To analyze the criteria for determining the high-tech industries of Ukraine and the USA, we suggest considering Table 1.

Table 1 - Criteria for determining high-tech industries

Country	Criteria				
USA	Expert and commercial (CB, AeA)		the share of spending on the innovative sector(ITA)	Specific weight of people employed in technology-oriented professions in total employment (BLS)	
Ukraine	The share of high-tech products in	The specific weight of personnel involved in	The share of high technologies in the complete	Evaluation of the level of innovativeness	Technical and technological level of Production

the total volume of products, gross added value	the innovation sector	set of products

Ukraine lags far behind the average indicators of the USA in the indicators of opportunities in the field of information technologies and the potential of innovations in industry. In this aspect, Ukraine does not have such advantages as the United States, whose economy is characterized by a fairly favorable industrial structure in terms of technological intensity.

Ukrainian engineers and scientists often have unique innovative developments. However, about 95% of them are not ready for implementation due to a lack of understanding of the market to which they offer their technology and business knowledge [2].

Analyzing the forms and methods of development of competition in international investment and innovation activity, the importance of the state in the formation of the investment environment should be highlighted. The state actively promotes the development of programs for attracting and using investments, participates in the management of processes and risks in innovative activities. The influence of the state is aimed at maximum support of its own innovative potential, leading scientific and design centers, as well as at ensuring the implementation of a scientific and technical policy that corresponds to the world level

Table 2 - The system of state support measures for innovative business in the USA and Ukraine

Mechanisms of state management of technological and innovative development of the USA		Formation of tools and mechanisms of scientific and technological development of Ukraine	
SBIR program (Small Business Innovation Research Program)	Providing start-up capital for small businesses and providing them with assistance	Fund for the promotion of developed forms of enterprises in the scientific and technical sphere	Allocation of so-called "seed" financing

Source: Created by the author based on [3].

In the practice of state management of innovative development of the world's leading countries, various forms, methods and tools of successful implementation of state scientific and technological policy have been formed, and this experience should be taken into account and used when forming Ukraine's own strategy for obtaining competitive advantages in the field of high-tech sector [3].Table 2 shows the system of state support measures for innovative business in the USA and Ukraine.

In 2009, the administration of B. Obama developed"American Innovation Strategy" [4], the second revision of which was in 2015. The strategy is aimed at ensuring economic growth based on innovation and scientific development as a way to increase income levels, create higher-level jobs and improve the quality of life.

Table 3 - Characteristics of the main directions of the "Strategy of American Innovation"

The main issues of strategy	Characteristic
Terms	-Expanding access to high-quality STEM (science, technology, engineering, and mathematics) education, improving the quality of technical education, increasing potential. - Contribute to the development of an innovative economy due to the immigration of highly qualified scientists, engineers, etc. - Creation of a leading physical infrastructure of the 21st century that is not only aimed at creating jobs, but also promotes the development of innovations based on scientific developments and economic growth in the long term. -Creating the next generation digital infrastructure. - Stimulation of innovation in the private sector. - Tax incentives for innovative activities. - From State Lab to Market: Commercializing Federally Funded Research. - Support for the development of regional innovation ecosystems. - Helping innovative American businesses become globally competitive.

Source: Created by the author based on [4].

According to the results of the experience of theUSA, it was found that the instruments of state support for stimulating the implementation of innovative potential of enterprises are direct budget financing and state orders for the development and production of innovative products, technologies and services. In the USA, at the legislative level, the allocation of funds by ministries and departments from their budgets is provided for enterprises to carry out research and development works in priority sectors.

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